THE RELATIONSHIP AMONG ENVIRONMENTAL PERFORMANCE, ECONOMIC RESULTS AND SOCIAL MEDIA PRESENCE

A Study of Voluntary Eco-Certified Hotels in Florida

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Abstract

This study sought to investigate whether there was a relationship among environmental performance, economic results and social media presence that contributed to the competitive advantage of Florida Green Lodging Program eco-certified hotels. While eco-certifications were not specifically cultivated for marketing on social media websites, the two-dimensional logos were developed as a meaningful marketing tool that can also be used in an online environment to convey a firm's commitment to environmental standards. Therefore, gaining an understanding of what connects the added marketing benefit of an eco-certification and the utility usage of an environmentally conscious hotel holds the possibility to garner positive economic results for firms that commit to specific eco-certification standards.

Built on a literature foundation of sustainable tourism, social media and theories that unite both subject matters, the study adopted a mixed-methods, sequential explanatory research design with an emphasis on the quantitative findings. The investigation was organized in two phases. The initial phase analyzed data from the FGLP to determine if relationships existed. The second phase provided supportive qualitative data to better comprehend the statistical findings discovered in the first phase. The study utilized both primary data collected from web-based surveys and dialogue paired with secondary data garnered from government forms and social media websites. The pragmatic underpinning of the study permitted the collection, analysis and interpretation of the statistical results combined with supportive qualitative findings structured by six hypotheses that addressed the study's aim and objectives.

The findings revealed 15 statistically significant relationships. Only four relationships contributed a positive economic result and 11 provided negative economic consequences to the eco-certified hotel. The statistical results were paired with qualitative concerns about the program's commitment to marketing and communication efforts. In addition, the study revealed a management factor may be limiting the relationship among environmental performance, economic results and social media presence, which could be addressed if a more holistic and cross-functional management approach was implemented at an eco-certified property.

This work contributes to the growing research between sustainability and marketing, and the use of social media within the hospitality industry, which extended the theoretical foundation of the resource-based theory for future research. The study made an original contribution of knowledge with its use of the resource-based theory to determine the statistical relationships of the physical and fiscal operations of eco-certified hotels in relation to their social media presence. It also extended the definition of marketing 'resources' to include seven social media web sites. Future research could continue the investigation among environmental performance, economic results and social media presence to include larger samples, different regions, non-certified hotels and even a contextual review of social media participation. Such findings hold the potential to understand if complementary relationships exist and if hotels could employ the findings to increase its return on investment in both environmental and marketing initiatives.
Keywords: Sustainable Tourism, Voluntary Eco-Certification; Social Media; Resource Based Theory

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Abbreviations

ADR	Average Daily Rate
AH&LA	American Hotel and Lodging Association
CGM	Customer Relationship Management
EMS	Environmental Management Systems
eWOM	Electronic Word-of-Mouth
FDEP	Florida Department of Environmental Protection
FGLP	Florida Green Lodging Program
ISO	International Organization for Standardization
LEED	Leadership in Energy and Environmental Design
NGO	Non-Governmental Organizations
RBT	Resource-Based Theory
ROI	Return on Investment
RevPAR	Revenue Per Available Room
SWOT	Strengths, Weaknesses, Opportunities and Threats
SSM	Sustainable Strategic Management
SCA	Sustained Competitive Advantage
UNEP	United Nations Environment Programme
UNWTO	United Nations World Tourism Organization
UGC	User Generated Content
VIF	Variance Inflation Factors
VRIO	Value, Rarity, Imperfect Imitated, Organization
WOM	Word-of-Mouth

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Chapter One

Research Context

1.1 Scope of the Research

The examination of eco-certified hotels and the relationships that exist among a hotel's environmental performance, economic results and social media presence are explored in this study of the Florida Green Lodging Program (FGLP). These topics and their convergence build upon previous theoretical investigations (see section 1.4) and are examined in the practical research environment of the tourism industry, which is one of the top employers in the United States and one of the top ten industries in 48 of the country's 50 states (AH&LA 2013b). The mixed methods investigation used the pragmatic philosophical foundation based on the resource-based theory (RBT) to determine if complementary or synergistic relationships may lead to a competitive advantage for sustainably minded hoteliers.

A literature foundation was initially established in sustainable tourism, social media and theories that unite both subject matters. The research then focused on eco-certifications within the hospitality industry. While eco-certifications were not developed explicitly for marketing within social media websites, these two-dimensional logos were designed as a "meaningful marketing tool" (Gross et al. 2014, p. 166) that can be used in an online environment to raise consumer awareness about a firm's commitment to environmental standards. Therefore, gaining the understanding of what connects the "added marketing benefit" (Deng-Westphal et al. 2015, p. 230) and environmental outcomes holds the possibility to garner positive results for firms that commit to eco-certification standards.

This study specifically investigated certified hotels within the government-sponsored, voluntary FGLP, which has been beset by funding issues and inconsistent certification requirements since its inception in 2004. Yet despite the ongoing struggles, the program continues to draw support from government officials and hoteliers seeking the opportunity to demonstrate their commitment to sustainable conduct. The subsequent sections of this chapter summarize the rationale for undertaking this study and present the framework for the remaining chapters.

1.2 Research Background

Maintaining a balance between economic prosperity and the wellbeing of the natural environment remains a theoretical theme and a practical challenge for researchers and business professionals (Stead and Stead 2008; Hart and Dowell 2011). Both parties seek sustainable solutions to cultivate this balance by strategically operating more productively and efficiently within the confines of their firm's environment to achieve a competitive advantage (Barney and Clark 2007; Kozlenkova et al. 2014). These same parties also seek to establish a balance and return on investment (ROI) on a firm's use of social media (Anderson 2012). Therefore the ability to combine such balancing acts would provide both theoretical and practical benefits.

The tourism industry provides a robust environment to investigate this challenge because it is a dominant contributor to the global economy that is also dependent on a destination's environmental, cultural and human capital for economic gain (UNWTO 2008; Goeldner and Ritchie 2009). Nearly one billion tourists travelled in 2012 (UNWTO 2013), more than 1.1 billion tourist took an international trip in 2014 (UNWTO 2015) and the UNWTO (2015) forecasted an increase of three to four percent of international tourism growth for 2015, which contributed to the generally upward trend for the global choice of destinations (Murphy 2013). That said, the predicted rise of global tourism (UNWTO 2015) paired with a general extractive view of the industry (Goeldner and Ritchie 2009), which values the land without regard to the removal of resources, have produced a detrimental combination that could negatively impact a destination if not addressed (Hunter and Green 1995; McIntosh et al. 1995; Beladi et al. 2009). "If tourism ultimately destroys the environment, then tourists have no reason to visit these countries" (Beladi et al. 2009, p. 39).

A variety of methods exist to curb negative environmental impacts within the tourism industry. These methods are commonly referred to as environmental management systems (EMS). An EMS applies a standard "informed by an ecological understanding" (Norton 1992, p. 30) that consists of voluntary and non-voluntary initiatives to create a unique environmental plan specific to an industry, setting, and firm. The individual components that comprise a firm's EMS will vary depending on its regulations and market demand.

One voluntary option available for firms to attain a range of environmental criteria is the adoption of eco-certification standards. Eco-certifications are administered by a third-party source, which include but are not limited to government agencies, non-governmental organizations (NGO) and trade associations (Honey 2002). Most eco-certification programmes are accompanied with a marketing brand or "stamp of recognition" (Deng-Westphal et al. 2015, p. 234) providing "assurance that the tourist operation or activity is conducted according to a known standard that enhances the environment or at least minimises environmental impacts" (Fairweather et al. 2005, p. 83). Although, Kong and Zhang (2014) found that many tourists did not recognize that their vacation could have an environmental impact. Standards set through these programmes encourage a firm to implement higher environmental standards while also providing a structure for a firm to track its results and compare these results with other certified firms (Font 2002). Since these voluntary eco-certification programs are administered by a variety of organizations, the qualifications differ widely for each program in an effort to customize the requirements to best suit the region and industry.

Eco-certification programs have "grown from a mere dozen worldwide in the 1990s to more than 435 today in 197 countries and 25 industry sectors" (Delmas et al. 2013, p. 10). There is not a national environmental tourism initiative supported by the government in the United States (Ernst and Young 2008), yet 22 states feature state-specific hospitality eco-certification programs (AH&LA 2013a). Of these 22 programs, 19 incorporate a graphic label to aid in the marketing efforts. The eco-certification program within the state of Florida is among the latter group that both encourages increased environmental standards and also visually promotes the effort via a marketing label. Florida provides a robust location to explore the intricacies, outcomes and possibilities of such a voluntary program because of its reliance on tourism, as it is the number one industry in the state (Visit Florida 2015) and this is partially because of the unique environmental attributes it offers visitors.

Florida boasts scenic coast lines and warm weather with an average temperature of 73 degrees Fahrenheit or 23 degrees Celsius (U.S. Embassy 2014), which help to explain

the second place destination ranking of both international and domestic travellers to the state compared to all 50 states in the country (U.S. Census 2012). 93.7 million visitors vacationed in Florida in 2013 (Visit Florida 2015). Tourism employs 1.1 million Floridians and provides a $76.1 billion financial impact to Florida's overall economy (Visit Florida 2015). These increasing numbers, paired with the necessary water, electricity and waste disposal to support the state's tourism industry, were the catalysts for the Florida Department of Environmental Protection (FDEP) to develop an eco-certification program (Shearer 2013a). The Florida Green Lodging Program (FGLP) was established in 2004 to offer the state's 4,689 lodging facilities (FDBPR 2014) the opportunity to be recognized for "commitment to conserve and protect Florida's natural resources" (FGLP 2013).

The FGLP claims to benefit the environment through conservation and efficiency practices, but it also "helps designated properties save money and increase occupancy rates. By reducing water and energy use and reducing waste generation operating costs go down" (FGLP 2013). In addition, certified properties receive marketing assistance from the FGLP, which is currently limited to two pieces of written correspondence and two printable posters available in three languages (FGLP 2014a). While the FGLP offers hoteliers the distinction to attract customers utilizing the program's marketing label, the traditional marketing tools do not address the 80 percent of travellers that use the Internet as their travel planning source or the 61 percent who use the Internet as inspiration for upcoming travel (Google 2013). Firms have failed by not keeping "up with changing consumer wants, needs, and tastes, changing technology, and changing competition" (Webster 2009, p. 26), but "businesses in the travel and hospitality sector have actively adopted the Internet as a new distribution channel as well as marketing medium" (Xiang et al. 2014, p. 245). Table 1.1 exhibits the variety of activities that travellers conduct in the online environment. To remain ahead of the curve, firms and organizations must embrace two-way communication channels or electronic word-of-mouth (eWOM) methods that not only permit property promotion, but also embrace interaction with current and future customers (Litvin et al. 2008). While two-way communication can be achieved during face-to-face moments, the introduction of social media sites permits two-way communication with a potentially larger audience. "Among all available information

sources, word-of-mouth (WOM) has long been recognized as one of the important external information sources for travel planning because of its high perceived credibility" (Dwyer et al. 2009, p. 8).

Table 1.1 Top Online Travel Activities (Google 2013)

Business Travellers	Online Travel Activity	Leisure Travellers
39%	Looked at travel content or reviews by friends or family	27%
45%	Requested more information related to an upcoming trip	31%
47%	Watched a travel video	30%
48%	Brainstormed or started thinking about a trip	42%
54%	Researched a destination, flight, hotel or vacation as a result of seeing an online ad	43%
55%	Read reviews from other travellers	42%
67%	Researched an upcoming trip	59%

In an effort to attract both domestic and international customers, the hypercompetitive market of Florida's lodging facilities (VisitFlorida 2014) require hoteliers to understand the changing customer base that is undergoing an unprecedented global socioeconomic and demographic shift in order to compete (Dwyer et al. 2009). "More specifically, markets have fragmented into numerous segments, each with its own unique value equation. Accompanying the fragmentation is the emergence of new media and distribution channels" (Slater 1997, p. 164).

Yet, a balance must still be struck between marketing efforts to attract customers that contribute to economic prosperity while still protecting the wellbeing of the environment to ensure the long-term viability of the tourist destination. These challenges encourage firms to creatively utilize, bundle and promote resources and capabilities in order to achieve a competitive advantage (Barney and Hesterly 2012; Kozlenkova et al. 2014). Such a sustainable approach is incorporated in the evolution of strategic management (Stead and Stead 2008). Traditionally, strategic management focused exclusively on efficiently coordinating an organization's resources to increase its profit (Porter 1981, 1990). This narrow focus began a subtle shift in the 1970s in

the United States (Kamara et al. 2006) to include external factors, to include the environment and the socioeconomic impact to individuals.

The United Nations closely followed when it officially recognized the importance of these external factors in 1983 when it established the World Commission of the Environment and Development (UNECE 2012). This global commission classified the expanded management focus as "sustainable development" (WCED 1987) and identified the practice as the "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED 1987).

1.3 Overview of Research Approach

The study's philosophical foundation was established to continue the investigation of the convergence of marketing and sustainability research that was highlighted in the Journal of the Academy of Marketing Science (2011: 39). A mixed methods research design, with the underpinning of the pragmatic paradigm, incorporated the research elements of both quantitative and qualitative approaches in a complementary manner (Creswell 2009). This approach was implemented to better understand the relationships among environmental performance, economic results and social media presence that contribute to the competitive advantage of eco-certified hotels. The pragmatic underpinning permitted the collection, analysis and interpretation of the statistical results combined with supportive qualitative findings (Tashakkori and Teddlie 1998) structured by six hypotheses that address the study's aim and objectives. The mixed methods approach utilized both primary data collected from web-based surveys and dialogue paired with secondary data garnered from government forms and social media websites.

The investigation will initially offer a descriptive and frequency analysis of the collected quantitative and qualitative variables. While these variables will provide a foundational understanding about the research topic and the FGLP, six hypotheses were utilized to explore the potential of relationships. The variables were then subjected to backward regression analysis, which is a deductive process used to predict the outcome of a particular relationship at a given time (Field 2013). Such

statistical analysis limits the results to relational findings that cannot be fully established to reach causation because of unconsidered external variables (Salkind 2006). Yet, the numeric results may reveal statistically significant relationships that could exist within the FGLP. These findings provide a foundation to future research and could theoretically be generalized beyond the FGLP population to other hospitality eco-certification programs and potentially beyond these limited confines when additional studies are developed utilizing a similar research design within different industries (Creswell 2009).

A thorough literature review was conducted prior to embarkation on the research study to understand the historical significance and origins of the topics, to identify gaps in existing research and to recognize the theoretical foundations supporting similar research.

1.4 The Knowledge Gap

Voluntary eco-certification programmes have historical roots dating back to the 1970s with the inception of the German Blue Angel certification (Bratt et al. 2011) and their global proliferation "currently exist in large numbers and in many forms" (Bratt et al. 2011, p. 2). Eco-certification programs have become "a policy tool associated with great expectations as a means of changing consumption patterns on a voluntary basis" (Rex and Baumann 2007, p. 571) and thought to be "one of the most promising forms of environmental information policy'' (Thøgersen 2000, p. 286). Despite the accepted presence of these voluntary programmes, research regarding the competitive advantage and impact are still limited and comprehensive quantitative findings are sparse (Teisl et al. 2002; Rex and Baumann 2007; Auld and Gulbrandsen 2012; Zhang et al. 2014). While similar research of product-based eco-certifications demonstrates that adopting these higher environmental standards produce a price premium and operational savings (Rondinelli and Vastag 2000; Delmas and Grant 2014), the research within the service industry is still in its infancy (Zhang et al. 2014). That said, a 2012 study (Zhang et al. 2012) confirmed a positive association between environmental outcomes and operational performance within the hospitality industry in the United States, which reinforced earlier operational efficiency findings at eco-certified hotels (Butler 2008). Peiró-Signes et al. (2012) also found a connection in Spanish hotels that indicated a positive relationship between eco-certified hotels and

fiscal results compared to non-certified hotels, with the exception of small rural hotels, which demonstrated no relation.

While these operational and financial findings are significant, these results overlook and do not account for the marketing potential that most eco-certifications offer their eco-certified properties to communicate to consumers via the graphic logo used to demonstrate the designation.

The logo is referred to as an eco-label, but a property possessing an eco-certification does not imply that it also possesses an eco-label. “In fact, they represent two sequential but distinct strategies” (Delmas and Grant 2014, p. 7) because a property must first comply with a set of standards to obtain an eco-certification, but must then determine if it should publicise such standards via a graphic eco-label. While certain consumer awareness behaviour has been measured in relation to these eco-labels, “the role of eco labels are seldom discussed in a marketing context” (Rex and Baumann 2007, p. 571). Previous studies include awareness studies after exposure to eco-labels (Hartwell and Bergkamp 1992; Hashizume 1992; Bratt et al. 2011) and purchasing behaviour inclination (Chase and Smith 1992; Teisl et al. 2002; Peiró-Signe et al. 2012). However, despite the initial positive consumer inclinations, additional studies confirm that consumer awareness and/or purchasing tendency do not necessarily produce a change in behaviour (Ginsberg and Bloom 2004; Rex and Baumann 2007; Chong and Verma 2013; Zhang et al. 2014). While these studies may consider the use of the eco-label, they still ignore the marketing potential an eco-label offers eco-certified hotels and “does not identify whether eco-certification could yield benefits for the manufacturer independent of the signal provided by the label” (Delmas and Grant 2014, p. 7).

Current studies also fail to notice how, when and where an eco-label is used in customer communication and more importantly, if these communication actions produce greater environmental and/or economic results for eco-certified hotels actively engaged in marketing and communicating with its customers.

In addition, reaching today's hospitality customer comes with a host of unique marketing challenges, "most particularly the eclipse of printed media and the rise of social media" (Dev et al. 2010, p. 459). Social media provides an attractive setting to incubate word-of-mouth (WOM) and interpersonal influence, which are considered the "most important information source when a consumer is making a purchase decision" (Litvin et al. 2008, p. 458). When WOM occurs in an online environment, it is further differentiated as eWOM. This influence may be especially important in the hospitality and tourism industry, whose "intangible products are difficult to evaluate prior to their consumption" (Litvin et al. 2008, p. 458). Yet, despite industry and consumer adoption of social media (Chung and Buhalis 2008; Leung et al. 2013), "the successful practice of manipulating and managing social media still remains largely unknown to practitioners and scholars" (Leung et al. 2013, p. 5) and "research will be needed to discover and refine effective marketing communication techniques" (Dev et al. 2010, p. 466) to efficiently connect with future hospitality customers and achieve a competitive advantage.

Porter (1996a) recognized that "environmental protection can benefit America's competitiveness if we simply approach it properly" (p. 35). The researcher considers the previously described gaps in literature as an opportunity to explore Porter's insight, to determine if the marketing presence in social media of an eco-certified hotel impacts its environmental performance and/or economic results. While the researcher recognizes that marketing alone cannot directly impact sustainable tourism, an established relationship will provide the foundation for future research and will reinforce the importance of an holistic management approach that respects the interconnectedness of the most diverse job responsibilities.

1.5 Aim and Objectives

The gaps in literature identified in section 1.4. led the researcher to establish the following aim for this study:

> To investigate whether there is a relationship among environmental performance, economic results and social media presence that contributes to the competitive advantage of Florida Green Lodging Program (FGLP) eco-certified hotels.

The objectives are:

1. Review the literature about sustainable tourism and the use of social media and marketing within the hospitality industry;
2. Evaluate the environmental and economic performance reported by FGLP eco-certified hotels;
3. Identify the social media presence and participation of hotels in the FGLP to discover how each property connects with the public in today's electronic environment;
4. Analyze the data to determine if relationships exist between environmental performance, economic results and social media presence at FGLP hotels; and
5. Determine if the findings contribute to the competitive advantage of FGLP hotels.

1.6 Thesis Outline

The structure of this thesis consists of:

Chapter two reviews literature within the domain of tourism and the rationale behind the environmental necessity to implement a sustainable approach to this global industry. A historical assessment of sustainable tourism and conservation leads to the modern management approach of embracing the triple bottom line to measure a firm's economic, social and environmental impact. The chapter provides both a theoretical understanding of sustainable tourism and a practical synopsis of sustainable tourism at a global level, within the United States and in the state of Florida.

Chapter three examines the impact of technology on WOM marketing and how this communication medium has evolved to eWOM marketing on social media websites. The examination of eWOM culminates with an assessment of how the hospitality industry and its customers are using these social media outlets.

Chapter four examines the theoretical perspectives adopted in previous research that connect the literature of chapters two and three of sustainability and marketing. After the review of the multiple theories and consideration of the sustainable tourism findings in chapter two and the WOM findings in chapter three, this chapter outlines the rational for the adoption of RBT as the theoretical foundation of this study.

Chapter five builds upon the literature review to develop the research design for this study, which includes the aim, objectives, philosophical underpinning and the hypotheses to be tested. A mixed methods approach is outlined and explained how it theoretically and practically is tested within the FGLP to better understand the relationship among environmental performance, economic results and social media presence.

Chapter six implements the philosophical framework and methods outlined in chapter five to discover, describe and analyse the quantitative and qualitative findings. The quantitative findings were subjected to backwards regression analysis and the results were used to aid in the qualitative data collection.

Chapter seven presents a discussion of the findings and how they theoretically and practically relate to the research domains of sustainable tourism, marketing and RBT, while also accomplishing the aim and objectives of the study. The chapter also includes the contribution of knowledge the study provided and recommendations for future research to further extend the research domains.

Chapter Two

Sustainable Development and the Tourism Industry

2.1 Introduction

Chapter two presents an overview of tourism and the rationale that moved the industry to recognize the importance of a sustainable approach. The chapter chronicles the inception and maturity of sustainable development within the field of management and as a global initiative. It later reviews a variety of voluntary and regulatory environmental management tools that are used by the tourism industry to protect the triple bottom line of a firm, which considers a firm's economic performance, social performance and environmental performance. The chapter concludes with a look at how sustainable development practically fits into tourism management and its implementation into the hospitality industry in the United States and the state of Florida.

2.2 Tourism

While some publications have declared tourism to be the world's largest industry (Roe and Urquhart 2001; Willson 2015), other literature draws attention to the multiple factions of industries that are included in the earlier assessments (AlSayyad 2013; Smith 2014) and therefore challenging the claim that tourism is the world's largest industry. That said, tourism has been found to be the "world's largest service sector industry" (Lew 2011, p. 150). The United Nations World Tourism Organization calculated that 1.1 billion individuals travelled the globe in 2014, which was the highest number on record for global tourism (UNWTO 2015).

The tourism industry is a compilation of hundreds of market segments with few aligned business strategies, yet categorized together because of the individuals they serve, as depicted in table 2.1 (Middleton and Hawkins 1998). But the tourism industry isn't the only example of vagueness within this realm. After a long history of debate and a divergence of definitions, "there is still no agreement over definitions of tourism or just what comprises the tourism industry" (Cooper et al. 1993). Okonkwo and Jacinta add that "tourism is very difficult to define in absolute terms because of imprecise and/or inconsistency in the usage of the concept; thus, it became difficult to define in absolute terms" (2013, pp. 126-127). Despite the difficulty of definition

consensus, the explanations of tourism have been categorized by the content each selects to emphasis. Burkart and Medlik (1974), Heeley (1980) and Vanhove (2012) cite the categories of conceptual and technical descriptions, and Leiper (2004) refers to three approaches of tourism definitions, which include economic, technical and holistic.

Table 2.1 **Main Segments Included in the Tourism Industry** (Adapted from Middleton and Hawkins 1998, p. 5)

Directly Involved	Indirectly Involved
Airlines	Cafes
Airports	Clubs
Car Rental	Casinos
Buses	Fast-food Outlets
Conference Centres	Golf Courses
Hotels and Motels	Museums and Galleries
Railways	Night Clubs
Resorts	Pubs
Theme Parks	Restaurants
Time Shares	Retail Shops
Tour Operators	Sports Stadiums
Travel Agencies	Theatres
Tourist Offices	Taxis
Visitor Attractions	Yacht Harbours

The early definitions of tourism typically emphasize the technical perspective because economists developed these calculated descriptions. The technical vision of tourism "allows various agencies to compile statistical measurements of activity" (Gilbert 2004, p. 49) of predetermined types of tourist and their related tourism activities. Many of the early definitions of tourism fell into the technical category and simply overlooked the social impact of tourism that the later conceptual approaches embraced. Table 2.2 highlights the evolution of tourism definitions and while some of

the contents vary, the overall concept of an individual commencing a temporary trip away from their residence remain consistent.

Table 2.2 Definitions of Tourism

Year	Definition
1910	"The sum total operations, mainly of economic nature, which directly relate to the entry, stay and movement of foreigners inside and outside a certain country, city or region" (Von Schullard 1910, cited in Gilbert 2004, p. 49).
1941	Hunziker and Krapf, in 1941, defined tourism as "the sum of the phenomena and relationships arising from the travel and stay of non- comprises domestic tourism and residents, insofar as they do not lead to permanent residence and are not connected with any earning activity" (Hunziker and Krapf 1941, cited in Ganesh and Madhavi 2013, pp. 145-146).
1977	"Tourism is the study of man away from his usual habitat, of the industry which responds to his needs, and of the impacts that both he and the industry have on the hosts' socio-cultural economic and physical environments" (Jafari 1977, p. 5).
1995	"The activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes" (UNWTO 1995, p. 8).
2008	"Tourism refers to the activity of visitors" (UN DESA 2010, p. 98).

For the purpose of this study, the definition of tourism adopted is a revision from the UNWTO:

> "Tourism is a social, cultural and economic phenomenon, which entails the movement of people to countries or places outside their usual environment for personal or business/professional purposes. These people are called visitors (which may be either tourists or excursionists; residents or non-residents) and tourism has to do with their activities, some of which imply tourism expenditure. As such, tourism has implications on the economy, on the natural and built environment, on the local population at the destination and on the tourists themselves" (UNWTO 2013b).

The United Nations World Tourism Organization provides further clarification into the definition of tourism by defining the forms of tourism, units of measurement used for statistical purposes, and the classification of tourists and trips. The basic forms for tourism defined by the UNWTO are:

- Domestic Tourism—"residents of the given country travelling only within this country" (1994, p. 5)
- Inbound Tourism—"residents travelling in the given country" (1994, p. 5)
- Outbound Tourism—"residents travelling in another country" (1994, p. 5)

The three forms of tourism described above can then be merged to develop three distinctive categories of tourism. These categories set forth by the UNWTO (1994) include:

- Internal Tourism—both domestic tourism and inbound tourism
- National Tourism— both domestic tourism and outbound tourism
- International Tourism—both inbound tourism and outbound tourism

The forms and categories of tourism provide the statistical underpinning for governments, researchers and firms to better understand who is visiting a destination and the related infrastructure necessary to maintain or even enhance the tourism experience at a given location. The Council of the League of Nations determined in 1937 the importance of developing universal definitions and the establishment of units of measurement to track and compare tourism activities across regions (UNWTO 1994). This statistical endeavour has continued to refine definitions and units of measurement for decades at United Nations conferences and the United Nations Statistical Commission continues to adopted many items to ensure regions across the globe are collecting similar information to be comparable. This comparable insight allows governments, researchers and firms to recognize trends and provide recommendations to take corrective actions. It also provides a common language that creates a global culture for tourism professionals.

Further refinement of the tourism units of measurement led to the adoption of what is now considered a traveller. This definition provides greater clarity and allows for a better description from a group of people involved in tourism, to now be demarcated as an individual traveller. The UNWTO considers a traveller to be "any person on a trip between two or more countries or between two or more localities within his/her country of usual residence" (1994, p. 6). Then there is a distinction between

international and domestic travellers, which is followed up with another distinction that segments and defines travellers as either 'visitors' or 'other travellers.' A visitor was deemed "any person travelling to a place other than that of his/her usual environment for less than 12 months and whose main purpose of trip is other than the exercise of an activity remunerated from within the place visited" (1994, p. 7). And yet another division was established among visitors by the UNWTO (1995) into the categories of 'same-day visitors' and 'overnight visitors.'

When classifying a visit or a trip, the UNWTO (1995) has encouraged its member states to adopt a standard classification system to improve comparability. The purpose of the classification system is to "identify behavioural consumption and expenditure patterns of the visitor" (UNWTO 1994, p. 11). Trips should be classified in one of the following six categories (Yu et al. 2012):

- Leisure and Recreation
- Visiting Friends and Relatives
- Business and Educational
- Health Related
- Religion Reasons and Pilgrimages
- Other

As much as possible, trips should also capture the length of the stay, country or region of residence and destination, means of transport to the destination, type of accommodation, and the trip expenditure. Armed with this tourism insight, countries and regions are better able to compare patterns and seek solutions before issues present themselves. The insight could also prove helpful in establishing a set of best practices to benefit all involved stakeholders (Baue and Murninghan 2011).

2.3 Tourism and the Environment

The global tourism industry has experienced a forty-fold increase in international overnight visitors between 1950-2012 and accounts for one in eleven jobs worldwide (UNWTO 2013). It also continues its geographic expansion beyond the traditional destinations in North America and Europe as new destinations recognize the socio-economic benefits of investing in tourism that include an increase in export revenues and infrastructure improvements (UNWTO 2013). While the industry has experienced

fluctuations in tourism-related traffic and revenue following regional catastrophes such as military actions, terrorist attacks and economic recessions, the general global trend as depicted in table 2.3 reveals ongoing growth and an expanding demographic of travellers (Weaver 2006; Murphy 2013). This ongoing growth, paired with a general non-extractive view of tourism, appear to make it an attractive industry that uses a destination's environmental, cultural and human capital for economic gain without negative effects (Goeldner and Ritchie 2009). However, despite this simplistic view, Dowling (1993), Hunter and Green (1995), Beladi et al. (2009) have recognized the detrimental impact that tourism has on both the environment and culture of a destination. Beladi et al. (2009) explained that, "the expansion in world tourism is increasingly posing a threat to the environment–particularly if tourism is not well planned and managed" (Beladi et al. 2009, p. 39). In fact, there is scarcely a tourist-related activity that does not involve using resources from the environment (Hunter and Green 1995).

An interpretation of table 2.3 should cause reason for pause to first consider the specific tourism environment and the individual that is under consideration, to determine what era best suites. While UNWTO (2013) statistics demonstrate expanded growth and an expanding demographic of travellers (Murphy 2013) much of the growth is still contained to travellers from the "western world" (Mowforth and Munt 2015, p. 392). Murphy (2013) characterises tourism in four chronological categories, which "relate specifically to populations of the First World only. Neither the historical developments themselves nor tourism can be understood without an analysis of their relationship with the prevailing power structures" (Mowforth and Munt 2015, p. 89). Subsequently, an evaluation of the table would place the FGLP study sample somewhere between the bottom two categories of consumer society and future.

Table 2.3 The Evolution of Tourism and its Growth Factors (Murphy 2013, p. 22)

Era	Motivation	Ability	Mobility
Pre-industrial	-Exploration and business -Pilgrimage/Religion -Education -Health	-Few travellers; those involved were wealthy, influential or received permission	-Slow and treacherous
Industrial	-Positive impact of education, print and radio -Escape from the city -Colonial empires	-Higher incomes -More leisure time -Organised tours	-Lower transport costs -Reliable public transport
Consumer Society	-Positive impact of visual communication -Consumer society -Escape from work routine	-Shorter work week -More discretionary income -Mass marketing -Package tours	-Growth of personal transport -Faster and more efficient transport
Future	-Vacations are a right and a necessity -Combined with business and learning	-Self-catering -Smaller families -Two wage earners per household -Demographic trends favour travel groups	-Alternative fuels -More efficient transport -Greater use of public transportation

Environmental awareness within the tourism industry began as an unconventional option in Germany and the west coast of the United States in the 1960s and was deemed the "tourism-environment relationship" (Knowles et al. 1999, p. 256). This option catered to the portion of society that rejected excessive materialism and recognized the damaging impact traditional tourism could have on a destination (Lanfant and Graburn 1992). While regional environmental movements sprung up globally in the subsequent decades, the United Nations took steps to encourage ecological responsibility for all of its members in the 1980s, which are discussed further in section 2.4.1. The backing of the United Nations lent a sense of legitimacy and authority to the environmental movement within the tourism industry and led non-governmental organizations (NGOs) and governments to initiate programs to promote the proposals set forth in the United Nations Brundtland Report (WCED 1987).

Table 2.4 The Tourism-Environment Relationship (Dowling 2013, p. 16)

Decade	Relationship	Aspects
1950s	Coexistence	—
1960s	Conflict	Environmental awareness; Mass tourism
1970s	Symbiosis	Tourism as a tool for conservation
1980s	Integration	Ecodevelopment
1990s	Sustainability	Sustainable development
2000s	Specialization	Wildlife tourism; Geotourism
2010s	Maturity	Widespread adoption; Responsible tourism

Despite laudable efforts from the United Nations, the relationship between the environment and tourism remains multifaceted, but researchers have attempted to categorize the connection to better understand the development and emergence of the cooperative phenomenon as depicted in table 2.4. Coexistence (Zierer 1952) and conflict (Akoglu 1971) were early descriptions of the relationship between tourism and the environment, and Budowski (1976) built on these previous findings in his tri-segmented description, which consisted of:

- Coexistence—Limited contact exists between tourism and the environment, but Budowski (1976) emphasized that this was an improbable relationship if and when tourism expands.
- Conflict—When a negative outcome is inflicted on either the environment or the tourism industry (Budowski 1976).
- Symbiosis—Highlights the commonality and the mutual benefit that exist between the environment and the tourism industry (Budowski 1976).

Budowski developed his explanation in the 1970s and his description is still applicable. The symbiotic connection points to the industry backing and profit earned from the tourism industry and its contribution to natural resource conservation and vice-versa, the importance of natural resources to attracting tourists. (Valentine 1993; Page and Dowling 2002; Dowling 2013). The mission of the National Park Service in the United States provides a strong example of a functional symbiotic relationship. Its mission seeks to preserve the "natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations" (NPS 2000). The park service collects fees and requests donations from more than 275 million domestic and international visitors annually (NPS 2014) and

uses the tourism earnings for conservation efforts. Theoretically, the symbiosis benefits both tourists and the environment, as tourists have the opportunity to visit the 400 parks in the country (NPS 2014) while still supporting conservation programs. Unfortunately, the optimistic mission sat in contrast with a study of the superintendents of the National Park Service that found that tourism related activities significantly increased the negative impacts to the park's natural resources (Wang and Miko 1997). The contradictory findings reveal the complications involved in a potential symbiotic relationship and the underlying importance of empirical evidence that must be involved in assessing a relationship.

Jafari's platform model provided a holistic view for the entire tourism industry, but this later description offered a "useful framework for understanding the emergence and development of sustainable tourism" (Weaver 2006, p. 4). Jafari (2001) hypothesized that four platforms could be used to explain the evolution of the tourism industry. The sequential design of Jafari's model emphasized building on the previous platform but deviated from the traditional sequential design, as each previous platform does not necessarily terminate. Instead, Jafari advocated the coexistence of all four platforms. The four platforms consist of:

- Advocacy—"Promoted its economic value and its contribution to foreign exchange" (Hawkins and Mann 2007, p. 352).
- Cautionary—"Focused on the negative impacts" (Hawkins and Mann 2007, p. 352), where the "community in particular felt that tourism was not quite as positive" (Deng-Westphal et al. 2015, p. 230).
- Adaptancy—"Sought to find a compromise between these stand- points by proposing a mitigation of the negative impacts and an enhancement of the positive" mostly in the 1980s (Hawkins and Mann 2007, p. 352).
- Knowledge-Based—"Were initiated in order to better understand the complexities involved" generally in the 1990s (Hawkins and Mann 2007, p. 352) and "scientific research was beginning to inform our approach" (Deng-Westphal et al. 2015, p. 230).

Jafari's model was expanded when Macbeth (2005) encouraged the addition of sustainability and ethics as necessary platforms within tourism. While Macbeth

supports the original platforms, the two additions better explain the ever-changing political environment in which the tourism industry is forced to operate.

Despite the relationship that continues to evolve between tourism and the environment, Butler (2000) stressed that ecological change is a natural process, and it is also not restricted to only tourist activity. Local residents and other industries must also bear the responsibility of protecting their native land. Unfortunately, "the frequent lack of baseline data against which to compare study data" (Best 2008, p. 34) and the natural ecological changes in a region make it difficult to pin down the specific causes of environmental degradation. Still, the predicted growth within the tourism industry (Roe and Urquhart 2001; UNWTO 2013) places increased pressure on frequently visited tourism regions and its stakeholders (Page and Dowling 2002) to implement environmental-friendly processes.

2.4 Sustainable Development

Sustainable development is the evolution of the strategic management approach, under the field of management. The underpinning of the management field grew from the industrialization of the manufacturing businesses that were thriving toward the end of the 19th century in industrialized cities in both Europe and the United States (Stead and Stead 2008). Adam Smith's *An Inquiry into the Nature and Causes of the Wealth of Nations* (1863) predated this era, but his collective works were used as an economic foundation to expand the management field to the mechanistic paradigm, which provided an explanation for the division of labour within an organization. While Adam Smith receives a great deal of credit as an early management architect, other early management contributors in the 20th century such as Frederick Taylor, Henri Fayol, Max Weber and Luther Gulick developed and expanded the simple management idea of using 'efficiency' and 'effectiveness' as an appraisal for a thriving organization as firms began to focus on productivity (Wolfgang et al. 1995). These two simple words set a strong research foundation for not only management, but also strategic planning and sustainable initiatives. Stead and Stead (2008) further explain:

> "The pursuit of effectiveness clearly gave rise to the need for strategic management. Simply stated, organisations have learned to scan their

> environments, analyse their capabilities, determine their strengths, weaknesses, opportunities and threats, conduct scenario analyses, and establish visions, goals and objectives because they want to be more effective – they want to do the right things."
>
> "The pursuit of efficiency has given rise to modern production and operations management. Organisations have developed sophisticated procurement, production and distribution systems designed to reduce wastes, resource use and energy use because they want to be more efficient – the want to do things right" (Stead and Stead 2008, p. 65).

Traditionally, strategic management focused on efficiently coordinating an organization's resources in an effort to increase its profit (Porter 1981, 1990). The strategic fiscal focus remained until the 1970s in the United States (Kamara et al. 2006), but organizations then began to recognize that external factors, such as the environment and social settings could also impact the overall performance of the organization. Around the same time, a mental shift was also occurring at a global level and the United Nations began considering initiatives to cultivate stronger environmental and social environments with its members (see section 2.4.1).

Although a change in mindset slowly occurred in the late twentieth century, in which leaders began to consider sustainability an important business consideration. The act of conserving resources has a long-standing presence in our global heritage, even dating back to some of the earliest civilizations (Mathieson and Wall 1982; Hardy et al. 2002) as far back as the thirteenth century (Jones et al. 2008). The ideas that underpin 'sustainability' date back to agricultural systems that sought to protect the land for future generations while still attempting to reap the highest capacity of goods (Swarbrooke 1999). The early conservationists provided a foundation for sustainable development that was divided into three categories: conservation, economic and community (Hardy et al. 2002). The division of subject matter still stands today, and the tri-faceted categories now provide the underpinning for many explanations of sustainability (Hart 1995; Elkington 1997; Stead and Stead 2004, 2008; Fairweather et al. 2005; Carter and Rogers 2008; Hart and Dowell 2011). Elkington (1997) conceived the visual description of the triple bottom line (figure 2.1), which seeks "economically feasible ways" (Stead and Stead 1996, p. 179) to prosper within the biologic confines of the earth, while equally respecting the social environment. While

it is only inclusive of three elements, these elements must be supported by a wide variety of processes to "integrate sustainability into the strategic core" (Stead and Stead 1996, p. 179) operation of the firm.

Bruner et al. (2002) explained that "good environmental and social practices also make good business sense, not only for protecting key tourism attractions, but also for appealing to increasingly environmentally conscious consumers throughout the world and saving money on disposal, mitigation and resource costs" (p. 78).

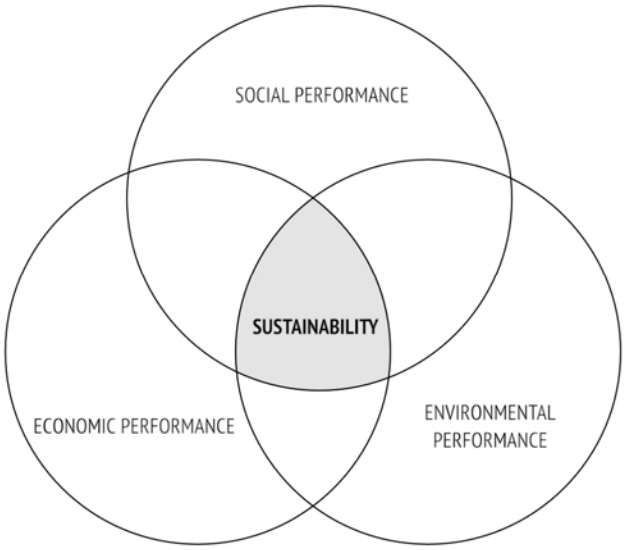

Figure 2.1 Triple Bottom Line (Carter and Rogers 2008, p. 365)

Other researchers have adopted a modified version of the triple bottom line and have titled it differently, but the core values remain the same. Stead and Stead (1994, 1996, 2000, 2004, 2008, 2010) opted to call the practice, sustainable strategic management (SSM). They define SSM as "strategic management processes that are economically competitive, socially responsible, and in balance with the cycles of nature" (Stead and Stead 2004, p. 36). Hart (1995) argues that "it is likely that strategy and competitive advantage in the coming years will be rooted in capabilities that facilitate environmentally sustainable economic activity – a natural-resource-based view of the firm" (p. 991). The Natural-Resource-Based View (NRBV) of the firm looks beyond the traditional financial competitive advantage and instead focuses

on the interconnected strategies of pollution prevention, product stewardship and sustainable development (Hart 1995; Hart and Dowell 2011). Another view says that firms must "build on the underlying economic logic that links the environment, resource productivity, innovation, and competitiveness" (Porter and Van der Linde 1995, p. 134). Other researchers proffer the quadruple bottom line (Dart et al. 2010; Lawler 2014), which incorporates the evaluation of the cultural awareness of a firm. While this additional measure tracks for a firm's impact on the cultural identity and well-being on a particular location or people, the current research study still adopted the use of the triple bottom line because the added measure is not necessarily "practical to measure the performance of organizations in all four performance areas" (Lawler 2014) at this time. Yet, Lawler (2014) claims that times are changing and "with the new metrics that are being developed as a result of big data and the tremendous computing and analytic power…it is more and more possible to measure their performance in all four areas." Despite the process or chosen vernacular, these processes all provide methods to reduce negative environmental impacts within a firm's standard operations.

A comprehensive model for sustainable development was published by Sharpley and Telfer (2002) that not only incorporated the elements included in the long standing triple bottom line, but greatly expanded each element with the fundamental principles of: equality, futurity and holism (displayed in table 2.5). The model encouraged the principle of equality to ensure that current leaders considered the impacts of the actions they undertook for both the current and future generations, but also took care to ensure these populations were and would be treated fairly. Futurity promoted a long-term, global view of decision-making and the holistic approach pushed leaders to consider how their decisions would impact current and future global citizens (Sharpley and Telfer 2002). Sharpley explained that sustainable development is a "juxtaposition of two schools of thought: development theory and environmental sustainability" (2000, p. 7). Sharpley's model has similarities to both Stead and Stead's SSM (1994, 1996, 2000, 2004, 2008, 2010) and Hart's NRBV of the firm (Hart 1995; Hart and Dowell 2011), but Sharpley and Telfer enhanced the model to include contemporary tools to accomplish the sustainable tasks. These modern

additions include the use of technology to solve ecological issues and the encouragement to work cooperatively across national and international borders.

The triple bottom line and even the updated versions of the quadruple bottom line and NRBV are still not without critics (Worth 2007; Mowforth and Munt 2015). The implementation of these evaluation methods employed in firms are debated as a response to appear to support environmental measures to avoid public relations disasters and attract environmentally-sensitive consumers. “The degree of progress is questionable, however, and the fundamental inequalities in the structure of the global trading system remain intact. The questions remain to what degree is CSR an adequate response to global poverty and inequality, and to what extent is it largely postmodern philanthropy centred upon the power of consumers and an incremental and partial voluntarist response in a inadequately regulated global environment” (Mowforth and Munt 2015, p. 184). Or an even more sceptical response called triple bottom line reporting a “confidence trick” (Worth 2007, p. 52). While the triple bottom line may have reason for ongoing critical review, it is the current policy mechanism in place for many global firms and therefore included in this study as the evaluation structure (Mowforth and Munt 2015).

Table 2.5 Sustainable Development: Principles and Objectives (Sharpley and Telfer 2002, p. 36)

Fundamental Principles	▪ Holistic approach: Development and environmental issues integrated within a global social, economic and ecological context ▪ Futurity: Focus on long-term capacity for continuance of the global eco-system, including the human subsystem ▪ Equity: Development that is fair and equitable and which provides opportunities for access to and use of resources for all members of all societies, both in the present and future
Developmental Objectives	▪ Improvement of the quality of life for all people: education, life expectancy, opportunities to fulfil potential ▪ Satisfaction of basic needs: concentration on the nature of what is provided rather than income ▪ Self-reliance: political freedom and local decision making for local needs ▪ Endogenous development
Sustainability Objectives	▪ Sustainable population levels ▪ Minimal depletion of non-renewable natural resources ▪ Sustainable use of renewable resources ▪ Pollution emissions within the assimilative capacity of the environment
Requirements for Sustainable Development	▪ Adoption of a new social paradigm relevant to sustainable living ▪ Biodiversity conservation ▪ International and national political and economic systems dedicated to equitable development and resource use ▪ Technological systems that can search continuously for new solutions to environmental problems ▪ Global alliance facilitating integrated development policies at local, national and international levels

Sustainability was publicly welcomed into the management professional arena in 1991 when the Academy of Management and the Strategic Management Society both recognized sustainability and corporate greening as important business schemes (Stead and Stead 2008). The global support for sustainable development can partially be explained by the prospect of achieving the attractive results that each word promises. Sustainability reassures "environmentalists and other advocates of slow growth or steady state approach" (Weaver 2006, p. 10) whereas development suggests a focus on growth. The conflicting definitions create a tempting combination of "continuing economic development that does not unduly strain the earth's environmental, socio-cultural or economic carrying capacities" (Weaver 2006, p. 10).

Still, the subject of sustainable development is not without its critics (Beckerman 1994; Robinson 2004), but much of the criticism stems from the broad definition and wide-variety of applications of sustainability. Although the wide-variety of applications for sustainability may be considered a detriment, Hart and Dowell (2011) viewed these opportunities, as constructive methods to "continue to gather momentum in the world" (p. 1476). They went on to say, "the opportunities to advance management theory have never been greater. Each provides important pieces to the sustainable development puzzle: the promise of 'next generation' technologies with dramatically lower environmental impacts, and innovative new ways to reach and include all of humanity in the capitalist dream" (Hart and Dowell 2011, p. 1476).

2.4.1 United Nations Support of Sustainable Development

Sustainability is not a new concept, but the United Nations recognized its importance in 1983 when it established the World Commission of the Environment and Development to better understand the world's environmental issues (UNECE 2012). The commission, commonly referred to as the Brundtland Commission, after Gro Harlem Brundtland, who was the former Prime Minister of Norway and the leader of the commission, sought to establish a global plan to address the sustainable concerns that plagued all countries and individuals from all walks of life (UNECE 2012).

The findings were so diverse when the Brundtland Commission published its results in 1987 that it was difficult to be overly explicit and yet inclusive of the global concerns and regional needs that ranged from issues relating to trade, education, health, environmental, education and even living conditions (WCED 1987). Still, the commission was able to present a new broad concept it referred to as sustainable development. This concept was defined as:

> "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED 1987).

The findings were published in a report titled; *Our Common Future* (WCED 1987) that recommended a path to achieve sustainable development would focus on supporting strong social, economic and environmental development. "The environment does not exist as a sphere separate from human actions, ambitions, and

needs, and therefore it should not be considered in isolation from human concerns. The environment is where we all live; and development is what we all do in attempting to improve our lot within that abode. The two are inseparable" (UNCSD 2012b). Understanding and incorporating this connection between human ambition and the overall health of a region requires a delicate balance and may benefit from policies, laws or even counsel from governing bodies and/or non-governmental organizations (Robinson 2004).

The findings at the Brundtland Commission were expanded in Rio de Janeiro, Brazil at the 1992 United Nations Conference on Environment and Development. This conference, informally titled the Earth Summit, adopted an expansive "blueprint for action to achieve sustainable development worldwide" (UN 1997) referred to as Agenda 21. Agenda 21 sought to "maximize the potential of tourism for eradicating poverty by developing appropriate strategies in cooperation with all major groups, and indigenous and local communities" (Sharpley and Telfer 2002, p. 17) while also focusing on environmental conservation. At the close of the Earth Summit, the Conference Secretary-General, Maurice Strong claimed the event was a "historic moment for humanity" (UN 1997). Agenda 21 also laid the foundation for the 1995 World Conference on Sustainable Tourism in Spain that established the Charter on Sustainable Tourism.

Every passing year provided additional sustainable recommendations (Robert et al. 2005), but the 2002 United Nations sponsored World Summit on Sustainable Development in Johannesburg, identified three important sustainable pillars which member countries were encouraged to implement to better manage their regional resources. The pillars mirror the triple bottom line (identified in figure 2.1) and "in many ways are interdependent and can be both mutually reinforcing or in competition. Delivering sustainable development means striking a balance between them" (UNEP and WTO 2005, p. 9). The pillars are:

- Economic Sustainability
- Environmental Sustainability
- Social Sustainability

The Brundtland Commission, set the global agenda and shifted the discussion over the past two decades towards social, economic and environmental development using its sustainable development definition (UNECE 2012). While the definition has been challenged from some groups for its lack of precision, it is this very "reason why some scholars support the original concept, which has been described as presenting a 'constructive ambiguity.' In a world with very varied political cultures and priorities the lack of definitional precision of the term 'sustainable development' may represent an important political opportunity" (UNECE 2012).

The concept of sustainable development continues to hold a prominent position on the world stage for the United Nations (Robert et al. 2005) as it hosts regular conferences, most recently in Rio de Janeiro, Brazil at the United Nations Conference on Sustainable Development held in June, 2012. This group of sustainably focused member states (UNCSD 2012c) committed to new initiatives. In addition to the initiatives, they also reaffirmed multiple sets of principles and action plans developed during previous conferences that date back as far as the Stockholm Declaration developed at the 1972 United Nations Conference on the Human Environment in Stockholm (UNCSD 2012a). The sustainable commitments also extend to the overarching and ambitious agenda laid out by the United Nations Millennium Development Goals (UNCSD 2012a; UN 2012). At the conclusion of the 2012 United Nations Conference on Sustainable Development, the global attendees, ranging from government officials, non-governmental representatives, academic researchers and members of the private sector, reaffirmed that sustainable development requires, "concrete and urgent actions" (UNCSD 2012a, p. 3) that take both, "holistic and integrated approaches" (UNCSD 2012a, p. 8) to address the unique needs of each region.

2.4.2 Sustainable Tourism

Sustainable tourism "may be regarded most basically as the application of the sustainable development idea to the tourism sector" (Weaver 2006, p. 10). While sustainable tourism is considered a form of sustainable development, the international report published by the Brundtland Commission (WCED 1987), which defined sustainable development, did not even address tourism. In addition, the United

Nations Conference on Environment and Development scarcely mentioned tourism in the follow up document to the Brundtland report in its 1992 document titled Agenda 21 (UN 1997). Yet, tourism professionals and academic researchers recognized the positive environmental and social impacts their efforts could have on a region, as well as potential fiscal gains these same efforts could have on a firm's bottom line (Young 1973; Mathieson and Wall 1982; Stead and Stead 1996, 2004, 2008; Bruner et al. 2002; UNEP and WTO 2005; Weaver 2006; Wu 2009; Hart and Dowell 2011).

Tourism has the distinctive perspective of being an industry that cultivates a rare, personal relationship with its consumers. Unlike other industries, the consumers of tourism, tourists or visitors, travel "to the producer and the product" (UNEP and WTO 2005, p. 9) which has led to three distinctive relational characteristics:

- Interaction—Contact between a traveller, its regional hosts and the host city remains a paramount portion of the service industry (UNEP and WTO 2005).
- Awareness—Travel creates a general appreciation and consciousness of cultural and environmental issues of a region, and on occasion this behaviour transfers to a visitor's home life (UNEP and WTO 2005).
- Dependency—The tourism industry is reliant on a providing a safe, welcoming, appealing and authentic environment for its visitors (UNEP and WTO 2005).

The unique relationship that exists between the tourism industry and its respective visitors has the possibility of producing polar opposite results being either destructive or beneficial for "triple bottom line reporting" of "social, economic and environmental results" (Fairweather et al. 2005, p. 82). Therefore, the industry and government policies pertaining to tourism have the responsibility of embracing sustainable conduct to avoid societal and/or environmental damage, which could "contain the seeds of its own destruction" (UNEP and WTO 2005, p. 10). The World Tourism Organization states that sustainable tourism "requires the informed participation of all relevant stakeholders, as well as strong political leadership to ensure wide participation and consensus building" (UNEP and UNWTO 2005, p. 11). It should also "maintain a high level of tourist satisfaction and ensure a meaningful

experience to the tourists" (UNEP and UNWTO 2005, p. 11) while encouraging future sustainable behaviour.

Sustainable tourism must not be limited to a specific region, visitor demographic or destination-driven activity. Instead, it should encompass rural and urban areas, mountainous and coastal terrain, historic and prospective attractions, affluent and poorly funded regions, as well as every other potential place of interest for visitors within a region. In an effort to encourage this widespread acceptance and implementation of sustainable practices, twelve aims were established to reduce the negative impacts of tourism, while capitalizing on its contribution despite the diversity of regions that welcome visitors globally. No aim is more important than another, but cooperatively they equally support the triple bottom line as depicted in figure 2.2. The twelve aims for sustainable tourism include (UNEP and UNWTO 2005):

Economic Viability	Community Wellbeing
Local Prosperity	Cultural Richness
Employment Quality	Physical Integrity
Social Equity	Biologic Diversity
Visitor Fulfilment	Resource Efficiency
Local Control	Environmental Purity

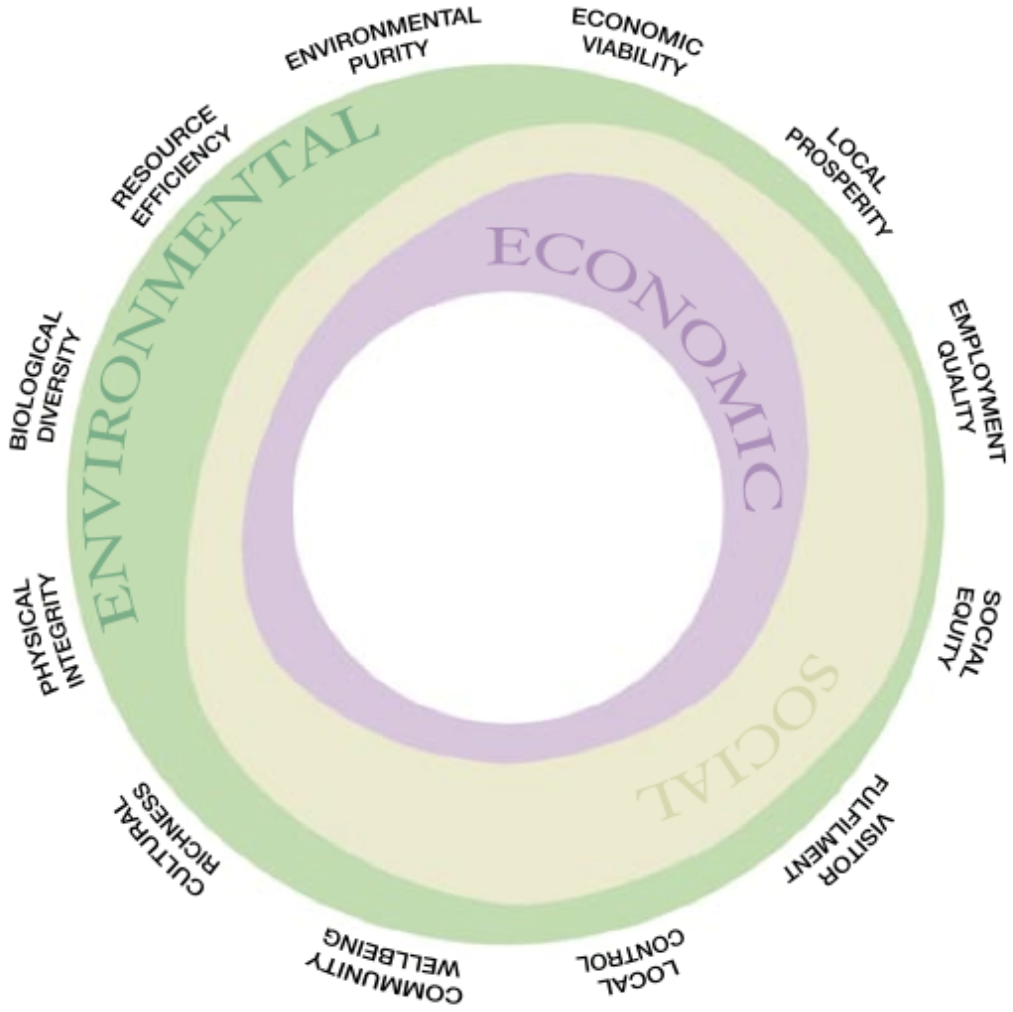

Figure 2.2 Relationship that Exists Between the Twelve Sustainable aims and the Triple Bottom Line (UNEP and UNWTO 2005, p. 20)

Destinations dependent on tourism were originally focused on reaping financial rewards, but in the 1980s (Weaver 2006) these same locations and the industry professional supporting them recognized the physical strain tourism was taking on their destination. In fact, the UN (2008) took the bold step to recommend "linking tourism and sustainability be considered a priority" (p. 86).

While sustainable tourism is now commonly acknowledged both in academic and industry arenas (Weaver 2006) there is still a great deal of confusion with what constitutes the definition of sustainable tourism (Font 2002; Honey 2002; Font and Harris 2004; UNEP and UNWTO 2005; Buckley 2009, 2012). Yet it is "widely accepted" (Robinson 1999, p. 379) that sustainable tourism reflects the framework

established by sustainable development. Table 2.6 highlights the range of sustainable tourism definitions. While some diversity exists between implementation and measurement, the overall concept of minimizing the environmental and social impacts on a destination while maximizing the economic benefits remain similar. "Slowly but surely, there appears to be a move away from seeking any definitive articulation of the concepts to more pragmatic discussions regarding processes of implementation" (Robinson 1999, p. 379) which provides an expanded, optimistic and practical approach to future sustainable tourism research (Fyall and Garrod 1997).

Table 2.6 Definitions of Sustainable Tourism

Year	Definition
1996	"Tourism which leads to management of all resources in such a way that economic, social and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems." (WTTC 1996).
1996	"The term may be applied to all forms of tourism which are in harmony with their physical, social and cultural environment in the long term" (Medlik 1996, p. 240).
1998	"Meets the needs of present visitors, tourism businesses and host destinations while protecting and where possible enhancing opportunities for the future. It is envisaged as leading to the management of resources in such a way that social, economic, and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity, and life support systems" (Middleton and Hawkins 1998, p. 247).
1999	"Tourism which is economically viable but does not destroy the resources on which the future of tourism will depend, notably the physical environment and the social fabric of the host community" (Swarbrooke 1999, p. 13).
2000	"Sustainable tourism is tourism that seeks to minimize ecological and socio-cultural impacts while providing economic benefits to local communities and host countries. In any certification scheme, the criteria used to define sustainable tourism should address at least minimum standards in the following aspects" (Mohonk Agreement 2000, p. 98).
2005	"Tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities" (UNEP and UNWTO 2005, p. 12).

This study has adopted the sustainable tourism definition provided by the UNEP and UNWTO (2005). While the 2005 definition is succinct, it still incorporates the triple bottom line goal with the understanding that achieving the multifaceted goal should be resource based rather than controlled by market demand to ensure the economic growth is accomplished in the least destructive manner. A point of clarity that may have further contributed to the definition would have emphasized the indefinite ending and the ongoing attentiveness that must be embraced in thriving sustainable tourism operations. In addition, Knowles et al. (1999) considered that some in the academic community "tend to take an optimistic stance" (p. 256) in its examination of sustainable initiatives in the tourism industry. Still, the "basic premise is that the key issues in sustainable tourism are defined by the fundamentals of sustainability, external to the literature of tourism research. This premise relies on the axiom that both the tourism industry, and sustainability, are real-world phenomena" (Buckley 2012, p.529)

The lack of definitional clarity also extends to a similar word, 'ecotourism,' which is sometimes used interchangeably with sustainable tourism, which only increases the confusion especially among industry and government officials (Honey 2002). Ecotourism is classified as a subcategory of sustainable tourism, which is considered a form of "responsible travel to natural areas that conserves the environment and improves the well-being of local people" (TIES 2014). Although, Honey (2002) points out that ecotourism does not necessarily mean that this form of tourism is sustainable and the word is sometimes loosely used to imply interaction with the natural environment. The remainder of this study will use the sustainable tourism description provided by (UNEP and UNWTO 2005), but it should be acknowledged that literature pertaining to ecotourism has been reviewed, considered and included because of its similarities.

2.4.3 Environmental Management and Tools to Protect the Environment and Natural Resources (Voluntary and Non-Voluntary)

Both the private and public sectors influence long-term sustainable success within the hospitality industry. Government or regulatory bodies are responsible for implementing environmental protections to protect the natural environment and

enforcing penalties on firms that do not comply with said regulations. These command and control policies or non-voluntary policies/tools are responsible for improved air and water quality in the United States in the late twentieth century (Rangel 2000). Rangel (2000) explained that these environmental wins are attributed to the limits placed on pollution by means of modern equipment and new technology. Although these methods have proven successful, they are also controversial because the more than 100,000 federal and regional regulations in the United States (Rangel 2000) have contributed to corporate complexities and financial burdens that may limit a firm's competitiveness (Rangel 2000) while distorting the free market society (Beckerman 1994). In addition, command and control policies generally result in higher costs to firms in developing countries because the new regulations imposed on infrastructure and processes are too expensive for local businesses to implement and ultimately impede the ability to compete with like international locations that already have established environmentally friendly protocols.

In contrast, incentive-based environmental policies or voluntary policies/tools are optional measures that firms can elect to incorporate in their business. These tools hold a two-fold rationale, which includes the betterment of the natural environment and the prospect of increasing a firm's bottom line (Rangel 2000; Rivera 2002, 2004; Potoski and Prakash 2005; Rivera et al. 2006) while providing a cost effective oversight method for the regulating body (Arora and Cason 1996). Voluntary initiatives are administered by trade associations, NGOs, and government agencies and require each firm to comply with pre-established terms and standards to qualify. Participation in voluntary initiatives sets compliant firms apart and provides the potential of economic growth from increased marketing opportunities and reduced operational costs, as well as positive environmental and social impacts (Rangel 2000; Rivera 2002, 2004).

Managing and implementing sustainable tourism operations within a firm require the understanding of both voluntary and non-voluntary tools (Rangel 2000). The use of voluntary tools are typically aimed at promoting environmental issues "beyond compliance principles" (Rivera and De Leon 2004 p. 419), while being paired with required government regulations. "Tourism management is always likely to comprise

a mix of regulatory and self-regulatory techniques" (Middleton and Hawkins 1998, p. xi). Such tools, commonly referred to as an EMS, have been used in other areas of business prior to their implementation in the hospitality industry (Meyer 2000). The installation of an EMS "applies a criterion informed by an ecological understanding of the system that provides annual yields, is governed by constraints necessary to protect the self-organizing and self-regulatory system that provides the context of annual management decisions" (Norton 1992, pp. 30-31).

Continuing the definitional disparity within the tourism and sustainability topic, the term environmental management has also conjured a range of definitions, but Yang et al. (2011) combed a range of explanations to develop a description that incorporated a collection of researchers' thoughts (Miettinen and Hamalainen 1997; Melnyk et al. 2003; Sroufe 2003; Matos and Hall 2007; Montabon et al. 2007). The determined definition of environmental management is:

> "A set of programs to improve environmental performance of processes and products in the forms of environmental management system, Life-Cycle Analysis, Design for Environment, Environmental certification" (Yang et al. 2011, p. 252).

An EMS can consist of a variety of voluntary and non-voluntary initiatives to create a unique environmental plan for a firm. The specific components that comprise a firm's EMS will vary depending on its needs, wants, regulations and market demand. Generally, an EMS will contain specific policies, plans, assessments and audits that establish its relationship with the environment (Darnall et al. 2008).

The most globally recognized EMS is the ISO 14001 framework (ISO 2009), which is sponsored by the International Organization for Standardization (ISO). The ISO is an independent society consisting of 160 national standards institutes from a diverse makeup of countries ranging from developed to undeveloped. More than 18,000 global standards have been established by the ISO to provide safe, reliable and quality products and services for current and future generations (ISO 2009).

The ISO formed the 14000 family of standards in response to the growing interest in sustainable development that came out of the 1992 United Nations Conference on

Environment and Development in Rio de Janeiro. The ISO technical committee for environmental management who is responsible for the 14000 family of standards, has developed 21 standards and has nine additional standards in the works (ISO 2009). These global standards provide a consistent EMS framework to support sustainable actions and outcomes despite the economic, geographic and/or social environment of a firm. The ISO 14000 family of standards address a range of concepts, including (ISO 2009, p. 5):

- Environmental management systems;
- Environmental auditing and related environmental investigations;
- Environmental performance evaluation;
- Environmental labelling;
- Life cycle assessment;
- Environmental communication;
- Environmental aspects of product design and development;
- Environmental aspects in product standards;
- Terms and definitions;
- Greenhouse gas management and related activities; and
- Measuring the carbon footprint of products.

"ISO 14001 is perhaps the most important and visible voluntary environmental program with over 36,000 registered facilities worldwide as of 2001, including 1,645 in the United States, and a 50% per year growth rate since 1996" (Potoski and Prakash 2005, p. 235). By 2007, more than 154,000 global firms had achieved the standards required for the voluntary ISO 14001 certification in 148 countries (ISO 2009). By, 2010 there were 223,149 global firms from 159 countries that had achieved the standards required for the voluntary ISO 14001 certification (ISO 2015).

In contrast to many other EMS schemes, ISO 14001 has amassed a "considerable amount of research…on participation and effectiveness" (Koehler 2007, p. 704). The research found that ISO 14001 "adopters are largely more R&D intensive facilities that have previously adopted similar quality management schemes" (Koehler 2007, p. 704), many of which are other ISO standards. This could either indicate a general

understanding of the ISO certification process or could signify a greater level of global respect for the internationally recognized group of standards. Corporations are under pressure from foreign firms to exhibit environmental management measures to attract and retain contracts (Koehler 2007) and because of this, even facilities involved with pollution-related industries are seeking the ISO14001 certification. Unfortunately, the certification does not necessarily produce greater environmental performance (King et al. 2005) because pollution is not calculated in 'absolute' levels and instead measured in 'intensity' levels, which are based on production volume and not the shear amount of polluted emission expelled (King et al. 2005). Therefore, while the adoption and continued growth (ISO 2015) of the ISO 14001 standard is positive for environmental management, it does not necessary transfer to results (King et al. 2005). Meaning that Mowford and Munt's (2015) contrasting view of EMS schemes could be accurate that such environmental measures are endorsed to avoid public relations disasters and attract environmentally-sensitive consumers.

ISO 14001 encourages the use of a variety of voluntary and non-voluntary initiatives to create the unique environmental plan specific for a firm. The ISO standards were developed with all service and product industries in mind, which has forced each niche industry to establish its own blend of best practices to achieve sustainability within their industry. While the tourism industry uses a wide-range of tools, the respective governing body is also encouraged to implement a sustainability plan for its region. The UNEP and UNWTO (2005) recommended 13 tourism tools, categorized under five main purposes for governments to consider, which are highlighted in table 2.7.

Table 2.7 Tools for Sustainable Tourism
(UNEP and UNWTO 2005, pp. 71-123)

Tool	Description	Purpose
Sustainability Indicators and Monitoring *(i.e. Sustainability Indicators, Benchmarking)*	"Indicators make it possible to monitor changes over time in a constant and consistent manner" (UNEP and UNWTO 2005, p. 72). "Monitoring sustainability involves taking measurements of environmental, social and economic conditions using selected indicators" (UNEP and UNWTO 2005, p. 74).	Measurement Instruments
Identifying the Limits of Tourism *(i.e. Carrying Capacity, Limits of Acceptable Change)*	"To recognize and abide by limits on the development of tourism and visitor flows" (UNEP and UNWTO 2005, p. 75).	Measurement Instruments
Legislation, Regulation and Licensing	These interrelated tools "can be used to strengthen sustainability by setting out requirements that are compulsory and enforceable, and which lead to sanctions and penalties if they are not met" (UNEP and UNWTO 2005, p. 78).	Command and Control Instruments
Land Use Planning and Development Control *(i.e. Integrated Area Management, Zoning, Development Regulations, Environmental Impact Assessment)*	"The location of tourism development should be based on strategic choices reflecting the agenda for sustainable tourism and these choices should be taken into account when considering wider spatial planning and local land use planning for tourism" (UNEP and UNWTO 2005, p. 84).	Command and Control Instruments

Taxes and Charges *(i.e. Business Taxes, Tourist Taxes, Taxes on Specific Inputs and Outputs, Charges on the Use of Amenities and Infrastructure, Assurance Processes)*	"These measures work through factors, namely cost, price and income, which have long proven to be major influences on the choices and decisions made by enterprises and consumers" (UNEP and UNWTO 2005, p. 89).	Economic Instruments
Financial Incentives and Agreements	"Economic instruments that influence the behaviour of enterprises by providing them with specific financial support or commercial opportunities provided that they act in a certain way" (UNEP and UNWTO 2005, p. 93).	Economic Instruments
Guidelines and Codes of Conduct *(i.e. Development, Management and/or Tourist Codes of Conducts)*	"Mechanism for setting out clear expectations or requirements of tourists, enterprises or other stakeholders, without the back up of laws and regulations" (UNEP and UNWTO 2005, p. 95).	Voluntary Instruments
Reporting and Auditing	"Reporting allows an enterprise or organization to describe the outcome of its efforts to manage its sustainability impacts, and to share this information with stakeholders" (UNEP and UNWTO 2005, p. 99). "An audit is a systematic evaluation of the organization's systems and actions, in order to see if it is doing what it says it will do" (UNEP and UNWTO 2005, p. 100).	Voluntary Instruments

Voluntary Certification *(i.e. Eco-Label, Health and Safety Compliance, Certification of Destinations and Amenities)*	"Mechanism for ensuring that an activity or product meets certain standards that may be set by government or agreed within an industry sector" (UNEP and UNWTO 2005, p. 102).	Voluntary Instruments
Voluntary Contributions *(i.e. Monetary Support, Help In-Kind to Local Conservation and Social Projects)*	"Tourists and the tourism industry are prepared to provide voluntary support for environmental conservation and the wellbeing of local communities in destinations" (UNEP and UNWTO 2005, p. 106).	Voluntary Instruments
Infrastructure Provision and Management *(i.e. Transport Provision, Public Utilities and Services, Security and Emergency Services)*	"Careful, holistic planning and management of infrastructure and services is needed, taking full account of the existing and potential future demand from tourism as well as from the local community and other sectors" (UNEP and UNWTO 2005, p. 109).	Supporting Instruments
Capacity Building	"Developing the potential and ability of stakeholders to make and implement decisions that will lead to more sustainable tourism, by increasing their understanding, knowledge, confidence and skills." (UNEP and UNWTO 2005, p. 112).	Supporting Instruments

Marketing and Information Services *(i.e. Conveying Accurate Images and Information, Promoting Specific Products and Experiences, Educational Programmes)*	"Direct, powerful and flexible tools that can be used to influence the performance of different types of tourism enterprise and the behaviour of tourists, by providing an essential communications link between destinations, products and visitors" (UNEP and UNWTO 2005, p. 119).	Supporting Instruments

If firms adopted innovative voluntary initiatives that are mindful of a firm's resources, Porter and Van der Linde (1995) explained that regulation maybe less necessary in the United States. In fact, we are in a "transitional phase" where firms are "inexperienced in handling environmental issues creatively" (Porter and Van der Linde 1995, p. 127). But a host of NGOs, government agencies and trade groups representing the tourism industry have established more than "250 voluntary initiatives, including codes of conduct, awards, best practices and benchmarking programs, labels, and seals designed to assure consumers that their services are provided in a more sensitive and more sustainable fashion" (Conroy 2002, p. 104). The results from these tools are measured by their own qualitative or quantitative standards, but no tool should be considered more important than another. Instead, a firm should view the triple bottom line results holistically and the results they produce collectively, but this should not exclude the possibility of adjustments to meet ever-changing market demands. As figure 2.2 depicts, the triple bottom line may appear to provide stronger and/or weaker results depending on which segment of the triple bottom line is used to gage the result.

While the focus of this study revolves around sustainable actions within the tourism industry, it should be acknowledged that the tools listed in table 2.7 are not exclusive to the tourism industry and might also be used within other industries to holistically encourage the ongoing protection of the natural environment.

2.4.4 Sustainable Development in the United States Hospitality Industry

163 million international tourists visited the Americas in 2012, which accounted for seven million additional visitors to the North and South American continents compared to the previous year (UNWTO 2013). This 2012 international tourist traffic contributed the equivalent of $213 billion dollars to these regional countries, which was a six percent increase over the previous year (UNWTO 2013). The United States experienced a seven percent increase of international visitors over the previous year to account for 67 million visitors in 2012, which ranked the United States as second, behind France, in international visitor arrivals (UNWTO 2013). While the U.S. sits in the second position for visitor arrivals, it comfortably rests in the first position in the ranking of international visitor spending bringing in approximately $126 billion annually (UNWTO 2013).

The tourism industry supports the growing number of international and domestic visitors within the United States. The industry accounted for 2.8 percent or $1.46 trillion to the total United States economy in 2012 and provided employment to 7.8 million Americans either directly or indirectly (U.S. Department of Commerce 2012). This makes the tourism industry one of the top employers in the country and according to the AH&LA (2013b) one of the top ten industries in 48 of the country's 50 states, plus the District of Columbia. While the tourism industry is inclusive of airlines, rental car companies, cruise lines, restaurants, tour operators, travel agents and other ancillary firms (table 2.1), the lodging industry contributed $155.5 billion to the country's economy (AH&LA 2013b). The geographic diversity of lodging facilities stretches from coast to coast and to nearly 53,000 properties with 4.9 million rooms nationwide (AH&LA 2013b), making it a regionally pervasive industry that is instrumental to the United States economy and landscape.

As section 2.3 revealed, the tourism industry and the environment are interconnected and this is undoubtedly evident in the United States. In many regions, the industry is dependent on the natural environment to attract visitors with its unique qualities, but the environment is also dependent on the industry to provide economic support for the region. In turn, the relationship has the potential to shift to an unfavourable situation if either the environment and/or the industry overlook the importance of respecting

each other. There currently is not a national green tourism initiative in the United States (Ernst and Young 2008) and as of July, 2013 there were 22 states (AH&LA 2013a) out of a total of 50 states in the United States that have state-specific hospitality eco-certifications. In addition, the AH&LA (2013a) recommends nine additional national environmental certifications for its lodging members to consider, which consist of:

- Audubon Green Leaf Eco-Rating Program
- Going Green
- Green Key Global
- EarthCheck
- Green Globe
- Green Seal
- EcoRooms and EcoSuites
- Sustainable Tourism Eco-Certification Program (STEP)
- TripAdvisor GreenLeaders
- U.S. Green Building Council (LEED)

Maintaining sustainable energy sources is a necessary feature for all communities and for a thriving lodging industry. Stipanuk (2001) found that the U.S. lodging industry was exceeding the energy consumption rates when measured against other industries in the United States. In fact, the lodging industry had a 14 percent increase in energy consumption, while the other buildings utilized for healthcare and education experienced a ten percent decrease from 1986 to 1995 (Stipanuk 2001). Such increases and shifting consumer attitudes have placed the lodging industry under increased pressure to improve its consumption rates, reduce its environmental impact, and demonstrate these achievements to government agencies, consumers and the local community (UNEP and UNWTO 1995; Manaktola and Jauhari, 2007).

A similar study of energy consumption structured by industry has not been conducted since the 2001 investigation in the United States, but the AH&LA conducts a biennial survey that provides contextual insight to environmental queries and also provides a general overview of other trends within the U.S. hospitality industry. The 2012 survey

was distributed to nearly 52,000 properties in the United States, with at least 15 or more rooms and received an overall response rate of 23 percent (AH&LA 2012). A recognizable increase was discovered in the percentage of "hotels working towards a green certification" (AH&LA 2012, p. 5) compared to the first time the question was asked in 2010 bringing the total of hotels achieving or working on a green certification to 49 percent from 44 percent. When that same question was categorized by respondent, it also revealed that the response is rather consistent across location with adoption rates ranging from 44 percent to 56 percent (AH&LA 2012), across price segment with ranges between 40 and 53 percent (AH&LA 2012) and across the number of rooms at the property with ranges from 41 to 57 percent (AH&LA 2012), which demonstrates that sustainable certifications are not limited to a particular segment of travellers.

The 2012 survey revealed that 76 percent of U.S. hotels have implemented a linen reuse program to reduce their water consumption and 75 percent of properties have implemented additional water saving measures, which is a significant increase from the 46 percent in 2008 (AH&LA 2012). The participation in linen reuse programs did not vary much across respondents, but there was a recognizable downward trend in implementing additional water saving initiatives when the results were categorized by price segment. The properties categorized as 'luxury' hotels had an 83 percent implementation rate of a linen reuse program, whereas, 'budget' properties only had a 47 percent participation rate (AH&LA 2012).

While the general trend shows positive implementation of recycling programs within U.S. hotels that began with an implementation recycling rate of 32 percent in 2004, which increased to 59 percent in 2012 (AH&LA 2012). A downward trend was discovered when responses were categorized by price segmentation, where the higher the cost also reflected a higher acceptance rate of recycling (AH&LA 2012). This is the same respondent category that also demonstrated a downward trend in the implementation of water saving programs (AH&LA 2012). The AH&LA results exposed that recycling programs are more likely to be employed at resorts and urban hotels and least likely to be visible at interstate properties, which is then consistent

when the results are categorized by the number of rooms as interstate properties are generally smaller than resorts and urban properties (AH&LA 2012).

A sustainable segment with potential for growth is the implementation of energy management sensors. The AH&LA survey concluded that 23 percent of hotels used these systems in 2012, which is only up from a 15 percent inclusion in 2004 (AH&LA 2012). The AH&LA recently added two questions directly tied to the Leadership in Energy & Environmental Design (LEED) rating scheme. The U.S. Green Building Council (USGBC) introduced LEED in 2000 as "an internationally recognized mark of excellence" that "provides building owners and operators with a framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions" (USGBC 2013). "A building is awarded points based on the number of elements it includes" (Mehdizadeh et al. 2013, p. 37) and is "currently one of the most recognized green building certification programs, both nationally and internationally" (Matisoff et al. 2014, p. 2001). The AH&LA (2012) found that hotels in the U.S. displayed only a slight increase in future plans to incorporate LEED plans in there building renovations from 12 percent in 2010 to 13 percent in 2012. There was no change with properties that incorporated LEED plans in their renovations in the previous year, which maintained a steady 10 percent implementation rate (AH&LA 2012). This ten percent LEED implementation rate for both 2010 and 2012 was a strong downward swing from the 21 percent LEED renovation rate in 2008 (AH&LA 2012).

The slipping confidence in LEED renovations may be explained by the growing literature that question the environmental claims and the future financial advantage that certified buildings are assured through the LEED recommendations (Bray and McCurry 2006; Humbert et al. 2007; Navarro 2009; Scofield 2009). Yet, despite the hospitality industry's lack of LEED plans, buildings in the United States continue to implement LEED recommendations at an increasing rate as depicted in figure 2.3.

> "The graph confirms the dynamic growth pattern generally attributed to the green building movement. A possibly important clue for the future development of eco-certification for buildings is the fact that the current recession, which according to most sources began around December 2007, has had no visible impact on the exponential growth of building certifications" (Fuerst 2009, p. 291).

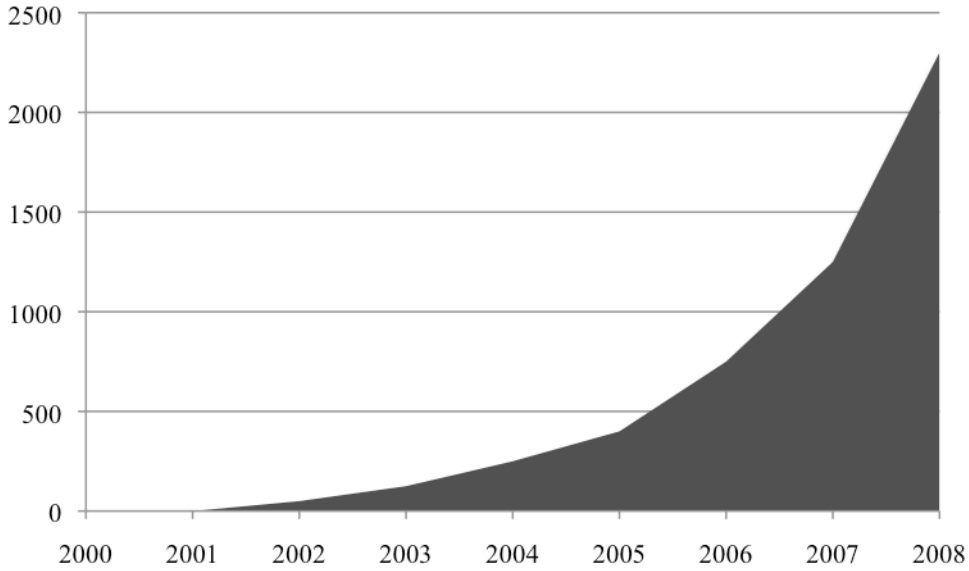

Figure 2.3 Number of New Certified LEED Buildings from 2000-2008
(Fuerst 2009, p. 291)

Hotels have been waiting for consumer demand to increase and renovation/building costs to decrease before fully adopting environmentally friendly ventures (Butler 2008). Hotel managers tended to worry that these green measures would increase rates and appear as an inconvenience to guests, but "current studies show green building costs are cost neutral to negligible" and "guests expect hotels to operate in an environmentally conscious fashion" (Butler 2008, p. 237). Despite the challenges in implementing new systems, determining appropriate renovations and adopting new procedures, the largest hotel chains in the United States "including Marriott, Hilton, Fairmont, and Starwood, are launching initiatives and announcing environmental programs that are likely to have sweeping effects on the development and operation of their properties" (Butler 2008, p. 235), which will continue to place increased pressure on other U.S. hotels.

2.4.5 Sustainable Development in the State of Florida's Hospitality Industry

Florida is the fourth most populated state in the United States with nearly 19 million residents with placement behind California, Texas and New York (U.S. Census 2014). Yet it ranks as 22nd in landmass with more than 53,000 square miles (U.S. Census 2014). Florida affably referred to as the Sunshine State because of its geographic

location and its average temperature of 73 degrees Fahrenheit or 23 degrees Celsius (U.S. Embassy 2014). It boasts nearly 1,200 statute miles of coastline with 825 of those miles consisting of sandy beaches that Florida's Department of Environmental Protection (FDEP) considers one of the state's "most valuable natural resources. Florida's beaches are deserving of this status because they serve several important functions, each being vital to maintaining the health of Florida's economy and environment" (FDEP 2014).

Tourism is the number one industry in the State of Florida (Visit Florida 2015) "due primarily to its natural resources, a favourable climate, an immense shoreline, theme parks, professional and major university sports, major airports and cruise industry ports, cultural events and retirement communities" (Bonn and Harrington 2008, p. 770). Baker and Aydin (2005) calculated that tourism related tax revenue in Florida accounts for nearly 20 percent of all collected taxes within the state. Visit Florida claims that every dollar spent on state marketing efforts generate $390 in tourism related spending and $23 in tax revenue paid by visitors, not Florida residents (Visit Florida 2014).

Visit Florida is not a government agency; instead the Florida legislature felt it was important to establish a public/private partnership in 1996 to ensure the state's Convention and Visitors Bureau (CVB) would benefit from the unique qualities that both the government and private industry individually possess (Visit Florida 2015). Each year, Visit Florida produces a detailed report that includes trends and characteristics of both visitors and residents, and their economic impact to the state and individual industries. The report is a compilation of federal and state government findings, paired with data submitted by independent research sources. The annual findings have been included in academic journals (Milman and Pizam 1988) even before the inception of the Visit Florida, when the state's commerce department produced the report to better understand the visitors to the Sunshine State and their impact. Today, the data are used in the creation of Visit Florida's marketing plan (Visit Florida 2015) and still are a source of information for Florida related studies (Furr et al. 2001; Bonn and Harrington 2008, Pennington-Gray et al. 2011).

As of 2013, there were 409,895 available rooms in Florida's 4,689 hotels, motels, and bed and breakfasts. (FDBPR 2014). While such a substantial lodging infrastructure is needed to accommodate the overnight visitors to the state, these visitors also contribute to the use of billions of gallons of water, more than 625 million kilowatt-hours of electricity, and contribute four percent of the state's overall solid waste disposal (Yon 2005). The 2005 data is the most recent collection of utility usage demarcated by overnight visitors to the sunshine state.

To address the environmental impacts of the tourism industry, the FGLP was launched in 2004 as a voluntary initiative under the FDEP that encourages lodging establishments to "make a commitment to conserve and protect Florida's natural resources" (FGLP 2013). The FGLP was also developed to help improve occupancy rates and drive down costs by reducing waste, water and energy use. In return, the 689 certified properties listed on the homepage of the FGLP website (FGLP 2013) "receive marketing and technical assistance benefits through the Florida Green Lodging Web site" (FGLP 2013) the ability to display the FGLP logo (figure 2.4), and its contact information is featured on the FGLP website (FGLP 2014b). Lodging facilities certified under the FGLP encompass a wide range of properties, from small, family-owned bed and breakfasts to 5,000-room hotels, to cabins in state parks to massive timeshare facilities. All properties are viewed equally and none of the properties are charged a fee to participate.

Figure 2.4 Florida Green Lodging Program Logo

All FGLP properties must perform an evaluation, complete an application (FGLP 2012a) and commit to six areas of sustainable business practices in the following areas (see appendix one):

- Communication and Education (Customers, Employees, Public)
- Waste Reduction, Reuse and Recycling
- Water Conservation
- Energy Efficiency
- Indoor Air Quality
- Transportation

This government-sponsored initiative is organized primarily online, but does conduct, "spot sight assessments…in order to uphold the integrity of the program" (FGLP 2013). Certification is valid for three years, but properties must complete an annual assessment (FGLP 2012b) that measures waste, water and energy usage. In addition, each certified property must implement a minimum of two new business practices from the original FGLP six sustainable areas every fourth year.

The state legislature, Florida's elected governing body, expressed its commitment to the FGLP in 2008 when it passed the legislative bill (House Bill 7135), which established Florida statute 286.29 that "recognizes the importance of leadership by state government in the area of energy efficiency and in reducing the greenhouse gas emissions of state government operations" (Florida Legislature 2008). This government endorsement is an added incentive for which FGLP properties are eligible. The state spent $19.6 million in 2009 and $15.8 million in 2010 on lodging expenses for state government employees (Alexopoulos 2011), because it requires all state agencies to use FGLP facilities for all official state travel, meetings and conferences that are paid for using government funds (Florida Legislature 2008).

In 2012, the FGLP strengthened its commitment to Florida's environment when it formalized its partnership with the Audubon Society and began encouraging FGLP certified properties to also strive for the Audubon International's Green Lodging Program certification. FDEP Sustainable Initiatives Director Brad Stombock explained "the partnership will allow us to provide a greater level of technical

assistance opportunities across the state, focusing on conserving our valuable natural resources and assisting in the development of operational efficiencies" (FDEP 2012). The new certification requires a comprehensive site evaluation and offers customized support to meet the unique needs that each property possesses, which are two attributes that the FGLP do not offer. 67 FGLP properties are now included in the 2,300 certified properties under the Audubon International's Green Lodging Program (FDEP 2012). In addition, the FGLP "encourages continuous environmental improvement" (FGLP 2014b) and offers its members addition resources, tools and opportunities for learning on its website and occasional networking events throughout the state.

2.5 Conclusion

The rich history of sustainability is rooted in acts of conservation, but the modern framework of sustainable development has provided the organizational foundation for the triple bottom line to theoretically thrive for generations. "Looking to the future, ongoing debate about climate change, concerns about population growth, and related trends seem likely to make sustainability even more important to firms and scholars" (Connelly et al. 2011, p. 97). With the global governance of the United Nations Millennium Development Goals and ongoing research, sustainable development has the foundation to prosper in the expanding tourism industry. While sustainable tourism is sometimes criticized for its definitional disparity and the ongoing perception of rhetoric over action, the positive momentum seen in the AH&LA 2012 survey and the commitment of hotels to attain sustainable certifications, like the FGLP, demonstrates the industry's commitment to a sustainable future. Yet, future research should continue to build on the foundation of previous findings to ensure that sustainable tourism progresses in an efficient and effective manner.

Chapter Three

Social Media and Word-of-Mouth Marketing

3.1 Introduction

Today's marketing efforts have moved beyond the traditional print and broadcast outlets to include interactive applications to reach customers utilizing social media in an internet-based environment (Constantinides and Fountain 2008)."It is no longer enough for businesses in tourism and hospitality to rely solely on traditional media for marketing" (Leung et al. 2013, p. 10) as "traditional media and old-style marketing are constantly losing ground as influencers of consumer behaviour" (Constantinides and Fountain 2008, p. 238). The impact of technology has been well chronicled in academic literature pertaining to marketing (Xiang et al. 2014) and "companies must be prepared to efficiently navigate through the ever changing landscape of social media tools" (DiStaso et al. 2011, p.327). This rapid pace forces researchers to have a solid historic foundation of literature related to Web.2.0 and social media, but also the foresight of predicting how marketers should further embrace the interconnected nature of this burgeoning technology (Line and Runyan 2012).

Chapter three chronicles the inception and maturity of Web 2.0 and social media. It reviews how social media is being tapped to interact with customers via Word of Mouth marketing with the goals of building awareness, increasing sales and building loyalty. The chapter concludes with a look at how the hospitality industry and its customers are using social media outlets, and the positive impact these interactions are having hotels return on investment.

3.2 Web 2.0 and Social Media

With the diminishing impact and reach of traditional media outlets (Waldman 2011), marketers were forced to turn their concentration to other sources to connect with consumers. Social media was an emerging substitute in early 2000 (Kaplan and Haenlein 2010), and has now not only become a flourishing approach to reach the general masses, but also an outlet to target marketing campaigns to niche groups (Coulter et al. 2012). "Businesses in the travel and hospitality sector have actively adopted the Internet as a new distribution channel as well as marketing medium"

(Xiang et al. 2014, p. 245) and social media websites combine both of these tasks. Social media refers to the conversation, networking and socialization capabilities that occur in an internet-based environment. Kaplan and Haenlein (2010) explain that "social media is a group of internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content" (p. 61). While this definition of social media is utilised in this research study, there is ambiguity among other definitional descriptions (Chan and Guillet 2011). Others refer to social media simplistically as an online technology used to develop and distribute information (Zarrella 2010). Still some view social media as a "community-oriented" (Weinberg 2009, p. 1) website to distribute information.

The World Wide Web was also thought of as a "virtual revolution in both the way marketing academics and practitioners alike approach the problem of effective, consumer-oriented marketing in emerging media environments" (Hoffman and Thomas 1996, p. 66). The revolution continued its transformation when Web 2.0 was introduced in 2005 and while various definitions of Web 2.0 exist, this study employed the understanding of Constantinides and Fountain (2008) because of its concentration on the business of the new generation of the Web.

> "Web 2.0 is a collection of open-source, interactive and user-controlled online applications expanding the experiences, knowledge and market power of the users as participants in business and social processes. Web 2.0 applications support the creation of informal users' networks facilitating the flow of ideas and knowledge by allowing the efficient generation, dissemination, sharing and editing/refining of informational content" (Constantinides and Fountain 2008, pp. 232-233).

While Web 2.0 has changed how consumers and firms interface with the Internet, it did not necessarily contribute to "many radically new technological components," (Constantinides and Fountain 2008, p. 234) but instead opened the door for the creation of new online applications for likeminded individuals and firms to connect. In fact, Web 2.0 does not refer to a technical update on the World Wide Web. Instead, it refers to the implementation of technical methods and tools utilized to produce User Generated Content (UGC) (Kaplan and Haenlein 2010). These methods and tools include, but are not limited to:

- Adobe Flash—Used for animation, interactivity and audio/video elements on web pages
- Asynchronous Java Script (AJAX)—Used to more easily update web content
- File Transfer Protocol (FTP)—A method used to securely transfer files from one computer network to another
- HyperText Markup Language (HTML)—A method of using alphanumeric characters to create and display a website
- Really Simple Syndication (RSS)—Provides aggregated data to multiple websites using web feeds

These tools provided the necessary framework for the development of websites that encouraged individuals to become participatory partners in online applications. The online applications were also synonymously referred to as social media (Constantinides and Fountain 2008; Kaplan and Haenlein 2010). These applications and/or social media can be segmented into categories as depicted in table 3.1.

Table 3.1 Classification Scheme of Online Applications and/or Social Media
Adapted from: (Constantinides and Fountain 2008; Kaplan and Haenlein 2010; Chan and Guillet 2011)

Online Application/Social Media	Description and Examples
Blogs and Microblogs	Blogs (truncated from web Log) act as an online diary or journal for a particular person, firm or brand. They typically consists of textual contribution of commentary that is followed and read by likeminded individuals. • Tumblr, Blogger, WordPress
Social Networking Sites	An application to create a personalized website to connect with people and/or firms that share similar interests and/or to establish a virtual connection with individuals that already have a traditional connection in the physical world. • Facebook, MySpace, Friendster, FourSquare, Google+

Content Communities	A website created to share a specific and limited type of content and/or material, which usually extends beyond textual contributions. • YouTube, Flicker, Instagram
Collaborative Projects	The content on these websites is assembled with UGC and remain 'open' for continuous modifications/additions by site members. • Wikipedia, Digg
Forums/Bulletin Boards/Sites for Feedback	A website developed for the exchange of information, opinions and ideas related to a specific topic. These act as virtual discussion of a topic via archived messages, organized by categories called 'threads.' • TripAdvisor, Zagat, FlyerTalk, CruiseCritic, Epinions, MacRumors
Content Aggregators	An application that enables web users to tailor the content they see and access, usually through the use of RSS feeds. • Google, Netvibes, Yahoo
Virtual Game Worlds	A website that provides the ability for individuals and/or firms to participate in a virtual three-dimensional environment under the constraint of the rules and goals set forth by the game. It encourages social relations through the use of avatars, which are animated characters depicting a human or other living creature portrayed in the game. • World of Warcraft, EverQuest
Virtual Social Worlds	A virtual, three-dimensional environment housed on a website that replicates a real life setting for individuals and/or firms to inhabit without the constraints of a game. Instead, participants are not limited by rules and can create a virtual life that reflects a chosen behaviour or personality. It encourages social relations through the use of avatars, which are animated characters depicting a human or other living creature portrayed in the virtual society. • Second Life

The user is a vital factor for all categories of Web 2.0 applications, not only as a consumer but also as a content contributor. UGC is often used to underscore this unique attribute of the Web 2.0 application categories (table 3.1).

Approximately 1.9 billion people worldwide use social media, which is "equivalent to a quarter of the world's population or nearly 40 percent of total internet users" (UNESCO and ITU 2014, p. 14) demonstrating it is not a passing fad, despite the 25 million Google recommendations for "social media fad" search terminology (Google 2014). While some sites may lose popularity and new technology may change how users interact with new online applications, communicating via social media continues to engage a worldwide audience. Facebook and YouTube boast more than one billion registered users each (Facebook 2015; YouTube 2015), Twitter affirms it has 288 million monthly active users (Twitter 2015), and FourSquare asserts is has 55 million users (FourSquare 2015). Researchers (Emanuel et al. 2013; Heravi and McGinnis 2013; Riedy and Bader 2013) have even taken to sharing the amount of newly added social media content in 60-second increments because the amount is so sizeable (table 3.2).

Table 3.2 How Much Data is Produced in Social Media Every 60-Seconds (Ahmad 2014)

Number	Every 60-Seconds, This Action Occurs
2,066,000	The search queries that Google receives
5,000,000	The number of videos viewed
433,000	Twitter users send this many 'tweets'
293,000	Facebook users share this many status updates
67,000	New photos are uploaded by Instagram users
3,400	Items 'pinned' by Pinterest users
3,600	New photos shared by Instagram users
1,100	Photos added by Flickr users
120	New users register with LinkedIn

It is important to recognize the fast-paced evolution of social media and the rapid addition of new social sites being added to the Internet on a daily basis (Kaplan and Haenlein 2010; Van Dijck 2013). Therefore it is imperative for a social media classification scheme to have the underpinning of strong theories that value the early infrastructure, but also recognize the value of forthcoming applications that will be developed. Kaplan and Haenlein (2010) recommend the combination of two theories from the fields of social processes and media research to best classify the past and future of social media.

Social media is foremost, social, so the interaction among users is built on the concepts of self-presentation and self-disclosure when constructing a classification

scheme. Individuals and/or firms engage in social media with the hope they can control their personal or company brand image to best reflect the personality or values they posses. The act of self-presentation is accomplished through the act of self-disclosure in the social media arena. Every time a user offers a bit of information through verbal or visual content, more of their brand is revealed. Therefore, disclosing, either consciously or unconsciously, who and what they stand for (Schau and Gilly, 2003; Kaplan and Haenlein 2010).

The understanding of the social presence theory and the media richness theory also contribute the overall classification of the 'media' related element of social media. First, the term media, as it relates to social presence theory is inclusive of all forms of communication, but it specifically refers to the "sense of being with another" (Biocca et al. 2003, p. 456) within the communication vehicle. Social presence theory states that the type of media used will influence the degree of how the information will be received. Therefore, an increase in social presence will increase the social influence a particular message or communication vehicle will provide. For example, a face-to-face conversation among friends—high social presence—will have greater social influence compared to a message posted on a firm's website—low social presence. This degree of social presence, or lack thereof, has the ability to influence the behaviour of all participants (Biocca et al. 2003; Kaplan and Haenlein 2010). The behaviour is also influenced by the actual information shared between participants. The media richness theory "is based on the assumption that the goal of any communication is the resolution of ambiguity and the reduction of uncertainty" (Kaplan and Haenlein 2010, p. 61). Therefore, the chosen vehicle of media, be it face-to-face or via social media application, will determine the 'richness' or quality of the information being shared.

All of the underpinning components included in the classification of social media are depicted in table 3.3. The table visually demonstrates which social media applications provides the greatest and least social presence/media richness and how these measures compare to the self-presentation /self-disclosure comfort level of an individual and/or firm.

Table 3.3 Classification of Social Media by Social Presence/Media Richness and Self-Presentation/Self-Disclosure (Kaplan and Haenlein 2010)

		Social Presence/Media Richness		
		Low	Medium	High
Self-Presentation/Self-Disclosure	High	Blogs	Social Networking Sites	Virtual Social Worlds
	Low	Collaborative Projects	Content Communities	Virtual Game Worlds

Despite the social media application employed, the inherent nature of social media allows messages to more effectively reach a larger audience compared to the previous, traditional communication and marketing channels (Edosomwan et al. 2011) that include direct mail, print adverts, radio notices and television commercials. By eliminating, or at least limiting, these costly communication methods, firms are able to continue their communication in a cost effective manner (Paridon and Carraher, 2009) with current customers/employees. At the same time, these firms have the ability to expand their reach by demonstrating their brand values and attributes via open conversations in social media forums with the ever-growing population, which are only limited by web connections and devices to connect to the Internet that can be limited in many developing countries (UNESCO and ITU 2014). These existing and budding relationships are made stronger when a firm is considered a trustworthy source for information (Edosomwan et al. 2011) and not as an outlet for damage control or another mechanism for selling. Therefore, a firm's participation in social media should ideally be a transparent source for participants to share positive and negative feedback and a forum for the firm to reduce rumours and highlight its unique attributes. If a firm fully embraces the holistic nature of social media, it has the potential to increase its brand recognition and to reap the long-term intangible benefits associated with a positive reputation and capture the advantage of individuals sharing their opinions and personal experiences (Hollier, 2009; Edosomwan et al. 2011).

3.3 Word-of-Mouth Marketing via Social Media

Consumer behaviour and purchasing decisions are impacted by the information shared between peers, which usually consist of opinions and personal experiences. This interpersonal communication is a critical component in the overall marketing strategy of a firm and is referred to as word-of-mouth (WOM) marketing (Cheema and Kaikati 2010; Castronovo and Huang 2012). Kozinets et al. (2010) define the WOM marketing as "the intentional influencing of consumer-to-consumer communications by professional marketing techniques" (p. 71), which is also commonly referred to as viral marketing, social media marketing and guerilla marketing (Sernovitz 2006). The Word of Mouth Marketing Association, simplistically define WOM as the "act of someone sharing something interesting with someone else" and WOM marketing as "any business action that earns a customer recommendation" (WOMMA 2014). This innovative marketing element encouraged marketers to spend nearly $1.54 billion on WOM marketing efforts in 2009 (PQ Media 2009) and 70 percent of companies that participated in the 2014 state of the WOM marketing survey indicated they expected this spending to continue increasing in the coming years "more than any other marketing channel" (WOMMA 2015). WOM marketing efforts are now considered one of the elements included in a firm's overall customer relationship management (CRM) plan designed to maintain and grow its customer base (Rosman and Stuhra 2013).

Consumers are more inclined to perceive WOM communication as a valid and reliable source of information when making a decision that involves expending time, money and/or emotions (Richins and Root-Shaffer 1988; Gershoff and Johar 2006). In fact, WOM marketing efforts have shown to be more successful than other conventional marketing and advertising endeavours (Godes and Mayzlin 2004). Despite the basic understanding of WOM marketing, it has been refer to as "the world's most effective, yet least understood marketing strategy" (Misner 1994, p. 26). An early-accepted definition for WOM communication was:

> "Oral person-to-person communication between a receiver and a communicator whom the person perceives as non-commercial, regarding brand, product or a service" (Arndt 1967, cited in Stokes and Lomax 2002, p. 4).

While the definition provided a strong foundation for WOM communication, the ever-evolving social media environment forced researchers to review the definition to better suit the emergent methods of interpersonal communications. Stokes and Lomax (2002) raised two issues with the early WOM description; first with the use of the words "oral person-to-person" and second with the use of the word "perceives."

By limiting WOM communication to only spoken words directly between individuals, it eliminates all electronic forms of communications including social media, but it also excludes other long-established methods of communications including the written word and photographs. Stokes and Lomax (2002) next establish concern with the notion that the communicator is perceived to be autonomous and not connected to the firm in which they made comments about. While autonomy is ideal and may contribute to higher self-presentation/self-disclosure (similar to table 3.3) (Kaplan and Haenlein 2010), the blurring of lines that influence individuals via WOM marketing especially via social media, should not be overlooked. Firms commonly encourage its customers to "like," "friend" and/or provide feedback on its social sites and then offer incentives to these same customers to recommend their friends and family establish a similar connection with the firm. These techniques are sometimes referred to as "reciprocal referrals," "member get member" (Stokes and Lomax 2002, p. 4) or "friendvertising" (Tuten 2008, p. 33) schemes, and put in question the autonomy of an individual's WOM communication established in Arndt's definition.

Taking into consideration the two issues with Arndt's 1976 WOM definition, Stokes and Lomax (2002) recommended the following WOM definition:

> "All interpersonal communication regarding products or services where the receiver regards the communicator as impartial" (p. 5).

Yet, continual interest in WOM communication combined with technological developments within social media environments (Litvin et al. 2008; Xiang and Gretzel 2010; Litvin and Hoffman 2012) has been the cause for further definitional evolution. While interpersonal communications is not a new concept, making the connection via social media has caused researchers to question using the established WOM nomenclature for this electronic communication (Meuter et al. 2013). Rosman

and Stuhura (2013) light-heartedly used the terminology 'word-of-mouse,' implying the communication transmission via a computer mouse. In an effort to differentiate the communication medium, the updated terminology of eWOM was introduced to distinguish traditional peer-to-peer communication versus WOM communication that occurs on the Internet (Buhalis and Law 2008; Xiang and Gretzel 2010). "eWOM is WOM disseminated across electronic channels—such as social networking sites, blogs and forums on the Internet, and mobile technologies—where people can interact with one another to comment on places, experiences, products, and services" (Tham et al. 2013, p. 146). Tham et al. (2013) go on to explain that the "terms social media and eWOM have been used interchangeably because they share the characteristics of user generated content disseminated electronically" (p. 146).

This study has employed the Hennig-Thurau et al. (2004) eWOM definition because it incorporated all messages and demonstrated an appreciation for the current changing communication environment.

> "eWOM communication is any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet" (Hennig-Thurau et al. 2004, p. 39).

Table 3.4 **Descriptions of Each WOM Message** (Adapted from Anderson 1998; Stokes and Lomax 2002)

Direction	Input—information requested prior to making a decision and/or purchase
	Output—information provided after a decision and/or purchase has already been made and an opinion has been rendered
Valence	Positive—satisfied and/or optimistic feedback is provided
	Negative—dissatisfied and/or damaging feedback is offered
Volume	The number of individuals the WOM message is distributed to and then, in turn potentially shared with in multiple social media environments

WOM messages are characterized by the components of a source, message and a receiver (Tham et al. 2013) and are further categorized using all three descriptions (Stokes and Lomax 2002) depicted in table 3.4. Despite the fact that WOM and eWOM communication both possess these similar traits, differences appear in the influential nature of how each of these messages are received (Tham et al. 2013), which is depicted in table 3.5. The remainder of this study will continue to use the

terminology of WOM, but will also use eWOM when the activity takes place in an online setting.

Table 3.5 Dimensional Differences Between WOM and eWOM (Tham et al. 2013, p. 149)

Dimensional Differences	WOM	eWOM
Source-Receiver Relationships	Known and Established	Potentially Unknown Source and Receiver
Channel Variety	Typically Through Face to Face or Phone	Mediated over Technology and Across Different Online Community Sizes
Information Solicitation	Dependent on Known Sources and Existing Source Profile	Wider Scope for Unknown Sources and Range of Source Profiles
Message Retention	Based on Ability to Recall	Representation Stored Online
Motivations for Disclosing Information	Assistance in Making Informed Decisions	In Addition to Decision Making, Opportunities to Socialize

While WOM communications continue to develop, so do WOM marketing efforts. This evolution is influenced by the changing way that individuals communicate with each other, advanced studies and understanding. The evolution of WOM marketing theory is depicted in figure 3.1, which demonstrates three theories of how marketing efforts influence conversations between consumers, and how marketers have refined these conversations over time.

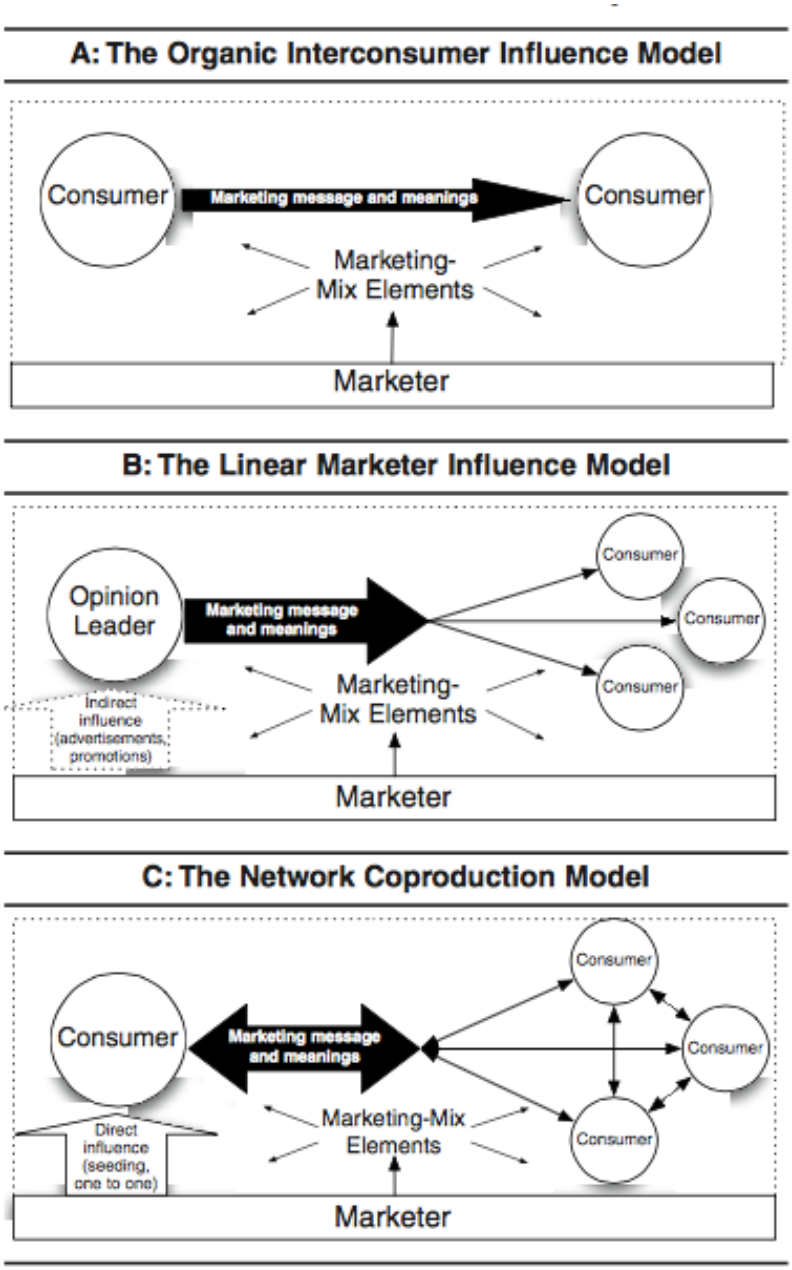

Figure 3.1 **The Evolution of WOM Theory** (Kozinets et al. 2010, p. 72)

The ability to connect with current and future customers on a regular basis and in a cost-effective manner (Godes and Mayzlin 2004; Castronovo and Huang 2012) has encouraged firms to embrace social media to promote their product or service (Trusov et al. 2009; Hennig-Thurau et al. 2010). In fact, "WOM marketing is quickly becoming a driving force behind all strategic marketing campaigns as the wide variety of social media outlets are increasing in prominence and maturity, and act as crucial resources for informing influencers' decisions" (Castronovo and Huang 2012, p. 118).

Interpersonal connections established via eWOM efforts have demonstrated stronger response rates and increased customer acquisition compared to traditional marketing efforts (Trusov et al. 2009). Brown and Reingen (1987) found the positive outcome in the traditional form of WOM was tied to the strength of the interpersonal relationship that existed between the individuals and/or firms exchanging the WOM communication. Hence, a long established relationship should theoretically prove more positive and a new or weak relationship may produce lack-lustre results. Knowing this, many social networking sites prominently feature a user's connection to other known individuals and/or firms to demonstrate that a relationship has already been established. This Internet feature builds on the findings that Brown and Reingen (1987) confirmed about WOM communications and referral behaviour. They found that even weak connections at a macro level demonstrate "an important bridging function" which allows insight to "travel from one distinct subgroup of referral actors to another subgroup in the broader social system" (Brown and Reingen 1987, p. 350).

Table 3.6 Social Media Strategy Goals and Related Metrics (Castronovo and Huang 2012, p. 125)

Goals	Related Metrics
Build Awareness	-Web traffic and web traffic referrals -Search volume trends and volume of followers -Social mentions -Share of voice
Increase Sales	-Web traffic and time spent on site -Bounce rate and content acceptance rate -Repeat visits and volume of followers -Social mentions -Share of voice
Build Loyalty	-Time spent on site -Repeat visits and volume of followers -Content acceptance rate -Repeated social mentions -Share of voice -Recommendations and reviews -Social connectivity among purchasers

Measuring eWOM marketing efforts and capturing its value and the WOM equity to a firm has contributed to many studies (Trusov et al. 2009; Kumar et al. 2010; Anderson 2012; Tham et al. 2013). There are many methods to measure these efforts (table 3.6), but there is no consensus and/or standard for the best measurement (Chen et al. 2013). WOM equity is determined by multiple factors listed in figure 3.2 and further described in tables 3.4 and 3.5, all of which influence the purchasing decisions and the continuation of the WOM cycle of a firm. While firms have many eWOM marketing measurement options to consider, it is helpful to also review its traditional marketing measurements to ensure the newly collected marketing metrics are comparable, which could include customer retention, sales, referrals, and customer satisfaction (Hennig-Thurau et al. 2010).

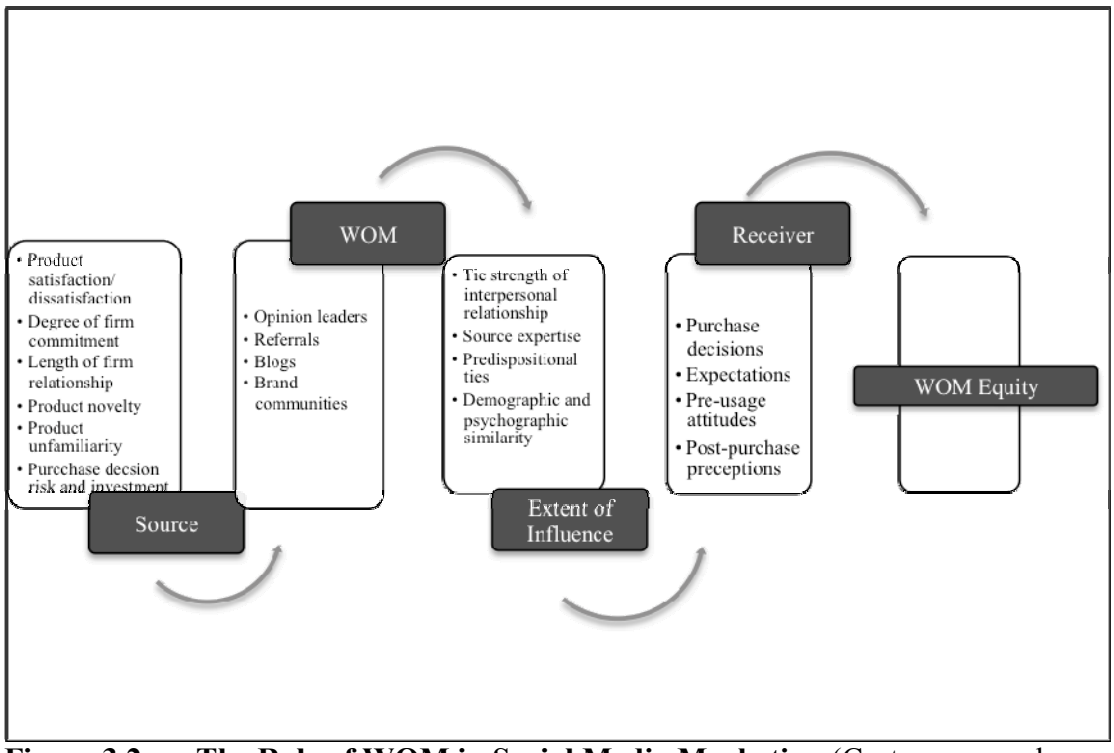

Figure 3.2 **The Role of WOM in Social Media Marketing** (Castronovo and Huang 2012, Appendix)

3.4 Use of Technology and Internet Applications in the Hospitality Industry

The relevance of technology and Internet applications within the hospitality industry "has dramatically transformed travel and tourism" (Xiang et al. 2014). "Historically, hotels have distributed information through print-based media such as brochures, travel planners or regional guides, and received reservations by mail, phone and subsequently by facsimile as technology developed" (O'Connor and Frew 2001, p. 346). Then, the growing influx of global Internet users increased because of

technological improvements and the decreasing costs of computers and Internet service, which allowed even more consumers to search for information about hotels without any "geographical or time constraints" (Law and Hsu 2005, p. 493).

Soon, travel and tourism online spending became the leading revenue segment in e-commerce (Hudson and Lang 2002; Law and Hsu 2006; Xiang et al. 2014) and "important technological developments such as social media and mobile systems emerged and grew to dominate the landscape of travel information on the Internet" (Xiang et al. 2014, p. 245), which led to further investment in the communication and distribution channels by the hospitality industry (Bennett and Lai 2005; Stringam and Gerdes 2010). The additional investment was not only geared toward online reservation applications and avenues related directly to revenue, it also provided support staff to encourage and respond to "online word-of-mouse recommendations" (Stringam and Gerdes 2010, p. 774) shared on social media websites.

The hospitality industry recognized the importance of online marketing that allowed potential customers to explore a particular property and surrounding region. This holistic investment encouraged Internet users to develop direct relationships with properties and to customize their holiday experiences to better suit their individual desires (Xiang et al. 2014). In turn, with the aid of technology, hotels are now able to communicate directly with its customers and offer distinct services that best match the unique needs of their guests while benefiting from lower distribution costs and the ability to reach a worldwide audience. The proper "convergence of technology, communications and content" (O'Connor and Frew 2004, p. 181) offered technology-engaged hotels a competitive advantage over technology-reluctant properties.

3.5 Electronic Word-of-Mouth Marketing via Social Media within the Hospitality Industry

Historically, hotels considered the Internet distribution channel to have two focal functions; supplying compelling one-way information to consumers and the ability for consumers to finalize a purchase (Middleton and Clarke 2001). Now, the ever-adapting Internet enables and encourages the exchange of two-way communication via social media applications, which has broadened a hotel's reach and responsibility

in the online environment. The combination of old and new communication methods allow Internet users to establish expectations about a property before they even arrive and whether they will financially commit to a particular property (Baloglu and Brinberg 1997; Middleton and Clarke 2001).

As the adoption of social media continues to grow (UNESCO and ITU 2014), traditional offline behaviour has shifted to the online environment, which includes commerce and WOM communications. Travellers have widely embraced social media to "search, organize, share, and annotate their travel stories and experiences" (Leung et al. 2013, p. 4) because it provides unfiltered UGC from a global audience via comments, videos and photos. "Many consumers rely on WOM to reduce the perceived risks and uncertainty before they make any purchases" (Buhalis and Law 2008, p. 613). In fact, Internet users that exchange messages via eWOM, which include hotel reviews and assessments, have caused marketing professionals to take notice and incorporate related online applications in their overall marketing plan. The Internet has become a clearinghouse of information and is considered a resource by consumers (Wang et al. 2002) and in turn is viewed as an important marketing tool for goods and services. It has "presented marketers with new avenues to improve the efficiency and effectiveness of communication, and new approaches for the acquisition and retention of customers" (Litvin et al. 2008, p. 458). In addition, these eWOM reviews were found to influence a decision to finalize a hotel reservation and the overall perception of a property (Gretzel and Yoo 2008).

Social media has been recognized for contributing to process improvement and increasing customer satisfaction within the hospitality industry, but more importantly it was recently proven to positively impact the return on investment (ROI) of a property's social media effort (Anderson 2012) because "it requires a low cost of investment, and yet can provide so many benefits" (Rosman and Stuhura 2013, p. 22). Hotel management had long "suspected that the effect of social media and user generated content on hotel performance has been strengthening" (Anderson 2012, p. 11), but a Cornell University study established "numerical confirmation and estimate of those efforts" (Anderson 2012, p. 11). The study found that an increasing number of consumers are consulting user-generated reviews on travel sites, such as

TripAdvisor.com, before making a hotel reservation. This was also reinforced by Barsky and Nash (2010) when they found that 51 percent of the hotel selection process was based on guest experience factors, which included online guest reviews. Guest experience factors even outrank a hotel's physical location with 48 percent and price at 42 percent (Barsky and Nash 2010). The 2012 Cornell University study (Anderson) quantified that a one point increase on a five point scale in customer review scores within an Internet forum enables a property to charge an increase of 11.2 percent and "still maintain the same occupancy or market share" (Anderson 2012, p. 5).

Hotel Business Review, a trade publication that targets hotel management, addressed hoteliers with the rhetorical statement of: "You know you should be on social media. Everyone is on social media" (Heyl 2014). The guidance offered to industry professionals mirrors academic findings (Trusov et al. 2009; Hennig-Thurau et al. 2010) as it encouraged the use of social media efforts to promote a property's brand to interested audiences and connect with them "at key points when they are making a decision, providing valuable information and inspiration that leads directly to sales" (Heyl 2014). In addition, Heyl reminded hoteliers that social media efforts are extended when guests share their positive experiences with their social media circles and she pushed properties to take a proactive role in building these relationships, which she defined as 'social sales pitching.' Industry professionals were also encouraged to track their social media involvement, just as scholars have suggested (Castronovo and Huang 2012). Hoteliers were encouraged to calculate the number of followers and engagement instances that occur each month because the "more your following grows and the more you develop online relationships with your followers the greater your reach and the greater your return on investment" (Heyl 2014). While the commentary is based on anecdotal industry recommendations, it demonstrates parallels to scholarly findings about the ROI of social media efforts (Barsky and Nash 2010; Anderson 2012). Academic literature reinforced Heyl's advice as it asserted that the "presence across multiple social media channels also increases the likelihood of converting online searches into actual bookings" (Noone et al. 2011, p. 299).

The ROI of a property's social media efforts can be classified by reviewing the information flow and time orientation of these Internet activities (Noone et al. 2011). Table 3.7 displays the interconnected nature of these classifications and how hoteliers can strategically capitalize with their social media participation:

- Information flow is organized as either inbound or outbound. Inbound refers to content created by consumers. Whereas outbound conversely refers to content created directly by the hotel or its corporate entity.
- Time orientation categorizes the length of time a particular social media action will have on a property's revenue. Short-term social media actions are typically tactical and have the potential to produce a prompt response. Whereas long-term social media behaviour is strategic in nature and aims at developing a lasting customer relationship.

Table 3.7 Framework for Evaluating Social Media Related Revenue Management Opportunities (Adapted from Noone et al. 2011, p. 296)

Information Flow	Time Orientation	
	Short-Term	Long-Term
Inbound (Customer-Generated Content) • Comments, ratings, reviews, photos, video	Inform promotional and pricing decisions • Configuration and pricing of promotions and packages	Inform strategy development • Pricing • Customer relationship development • Distribution channel management
Outbound (Firm-Generated Content) • Offers and promotions, press releases, property Facebook page and Twitter account, firm blogs, firm created videos and photos, firm responses to customer reviews	Drive demand creation and build brand awareness • Execution of push strategies: rooms and ancillary revenue streams	Drive customer development and retention • Development of micro-sites targeted at specific customer groups • Engagement in social blogging

In an effort to remain competitive, hotels must advance their social media participation with a balanced approach as they attempt to engage with loyal customers and attract new customers (Rosman and Stuhura 2013). Due to the continually

growing number of social media sites seeking to connect individuals with friends, family and businesses (Evans 2012), hoteliers must conduct careful research to determine the best use of their time and financial commitment to connect with present and future customers in this manner. A 2011 study of the hotel industry's social media marketing behaviour in Hong Kong found that Twitter and Facebook were the "most widely used in the industry" (Chan and Guillet 2011, p. 353). YouTube, Flickr and TripAdvisor round out the top five popular social media sites used by hotels as highlighted in table 3.8. While Chan and Guillet (2011) reviewed 23 social media sites, only the top five sites were "popularly used social media sites in the industry" (p. 353) and the remaining sites "were unpopular among hotels" (p. 354).

Table 3.8 Top Five Social Media Sites Used by Hotels and the Percentage of Hotels That Use Them (Chan and Guillet 2011)

Facebook	56.7%
Twitter	53.7%
YouTube	38.3%
Flickr	26.9%
TripAdvisor	23.9%

Chan and Guillet (2011) found seven problems that hotels encounter when communicating via social media channels that should be considered as properties enter the interactive environment and/or continue the social media journey. The problems include:

- Lack of interaction between hotels and customers;
- Lack of commitment to sustain social media marketing efforts;
- Problems encountered in accessing hotels' social media sites;
- Inability to use social media to disclose the organizational identity;
- Unresponsiveness to guests;
- Inaccurate content and use of language; and
- Lack of communication between different business levels (pp. 358-363).

The noted social media problems from the Chan and Guillet (2011) study, combined with the findings in the Anderson (2012) study, concluded that hotels should have a firm understanding about how social media fits into their corporate culture and what

their customers expect from them in the social space. Chan and Guillet (2011) determined that social media sites that were overseen at the corporate level typically had greater participation rates. The findings encouraged hotels to keep a close eye on competitors social media presence and tailor social media participation to ensure it did not exclude relationships with future customers. In fact, such social media participation could also be viewed as a means to collect "market research" (Chan and Guillet 2011, p. 365) to increase customer satisfaction. eWOM communications can provide "valuable market information that is not directed by researchers, but freely volunteered by guests, thereby offering a raw opportunity to read industry performance trends as well as benchmark a hotel against the industry in general" (Jeong and Jeon 2008, p. 137).

3.6 Conclusion

Communicating and attracting travellers to a particular location has transitioned over time from traditional media outlets to now also include an online environment. While specific marketing techniques differ in delivery depending upon the medium, be it print or online, positive WOM recommendations remain a consistent technique that aids the marketing efforts of the tourism industry. A foundational understanding of this marketing technique provides the underpinning for understanding how eWOM suits social media websites, but also provides insight to predict how marketers could continue to embrace the interconnected potential of the social media marketing vehicle.

Chapter Four

Organizational Theories for Marketing and Sustainability

4.1 Introduction

Chapter four begins with a review of theoretical perspectives used within strategic management research and adopted in the study of sustainability and marketing. The literature review resulted in the selection of the resource-based theory to determine if hoteliers consider eco-certification to provide a greater sustainable or marketing competitive advantage. RBT places an emphasis on the connection between a firm's internal resources and the firm's ability to achieve a competitive advantage over like firms within the same industry, making it a strong perspective for the current study.

The chapter concludes with an evaluation of how the concept of RBT and the resulting competitive advantage apply to both sustainability and marketing research to better understand the theoretical foundation of the current study.

4.2 Review of Theories Employed in Sustainability Research within Marketing

The individual concepts of marketing and sustainability have many theoretical perspectives that support rigorous research as outlined in the previous chapters, but the theoretical underpinnings for the combination of the two have been the recent topic of consideration in academic journals (Ketchen and Hult 2007; Shook et al. 2009; Connelly et al. 2011). These considerations derive from established management theories, but recognize that researchers must seek innovative insights within a reputable framework to "develop a more holistic conceptualization of sustainability" (Connelly et al. 2011, p. 87). Wind (2009) made a similar argument that these theories must embrace innovation to accommodate the evolving marketing environment. Nine theoretical perspectives (Connelly et al. 2011) were presented in the special edition of the Journal of the Academy of Marketing Science (2011: 39) that recommended the convergence of both marketing and sustainability within organizational research. Each theory is briefly reviewed in this section and was considered for inclusion in the study.

4.2.1 Transaction Cost Economics

Economic rationale supports a firm's decision to engage in tasks and/or develop products under the transaction cost economic (TCE) theory (Williamson 1973). TCE promotes the evaluation of the overall costs associated with taking on a project using internal resources, compared to the overall transaction costs of completing the same project using external sources. TCE also considers the cost benefit analysis of said project, and whether the internal or external costs associated with the project will reap fiscal rewards on the firm's balance sheet to justify proceeding. The traditional view of TCE cautions firms of engaging in sustainable activities because it has the possibility of diverting "managers from their primary responsibility of maximizing shareholder wealth" (Connelly et al. 2011, p. 88), but Mahoney and Qian (2013) counter the argument by pointing out that sustainable activities have the possibility to both increase revenue and reduce operational costs.

4.2.2 Agency Theory

The responsibility of running a business falls to both a firm's principal, which could be the owner or shareholders, and the firm's agents, also known as the managers. Agency theory recognizes that both of these parties may have divergent interests or agency problems when it comes to the governance of a firm. To overcome this challenge, principals can implement procedures to monitor and/or motivate agents to ensure they act in the interests of the principal and maximize the value of the firm (Dalton et al. 2007).

Agency theory allows a firm's principal to present long-term sustainable goals and build agent incentives to achieve said goals. Unfortunately when multiple principals are involved, goals may differ with expected earnings, ideology and even the length of time a principal/investor plans to keep the firm in their portfolio (Bushee 2001). Short-term principals/investors are sometimes viewed as too opportunistic, and may not see the value in investing in sustainable investments (Christensen and Anthony 2007). "When managers are faced with competing interests of principals their allegiance is divided," (Connelly et al. 2011, p. 90) which could compromise their ability to employ sustainable initiatives.

4.2.3 Institutional Theory

Institutional theory proposes that firms make strategic decisions based on external influential pressures and influences to achieve legitimacy. The strategic decisions allow firms to survive and/or thrive by implementing emerging initiatives or industry-approved changes. The external pressures can occur by three means:

- Coercive isomorphism—some strategic decisions are made through coercion or warning of a government sanction, code or standard (Meyer and Rowan 1977). These can also be caused by control asserted by suppliers (Dimaggio and Powell 1983).
- Normative isomorphism—some strategic decisions are made when firms implement standardized values or recommendations from academic institutions, trade organizations, professional associations and the media (Humphreys 2010).
- Mimetic isomorphism—some strategic decisions are made when firms replicate projects and practices that their competitors have implemented successfully (Dimaggio and Powell 1983).

Institutional theory suggests that firms that are aware of sustainable initiatives and currently implementing said initiatives are likely contributing to future sustainability practices (Connelly et al. 2011).

4.2.4 Organizational Ecology

Firms must adapt, evolve or cease to exist in response to their operating environment (Connelly et al. 2011). These changes will also open doors to new businesses that are willing to operate with the emerging environmental demands placed on them through regulations, customer preference and/or transforming ecosystem. Organizational ecology monitors and analyzes this lifecycle of firms and seeks to uncover the variables that increase a firm's longevity or its decline. Shrivastava (1995) recognizes that older firms with outdated sustainable practices have the possibility of survival if they take a proactive approach and embrace new sustainability initiatives. Yet, newer firms that are not saddled with old practices are more likely to benefit from contemporary sustainable recommendations.

4.2.5 Resource Dependence Theory

The central premise of the resource dependence theory (RDT) revolves around power, who has it and what rewards they receive because of it. RDT provides the rationale for firms to reduce uncertainty and gain greater control by simply decreasing the use of external products, processes and/or resources that are used within a firm (Hillman et al. 2009). In turn, the firm must counteract these reductions by cultivating these resources either internally or by implementing processes to operate without said resources. If either of these options is not possible, a firm could simply increase the number of external sources it receives its resources from to ensure it is not overly dependent on one particular source.

RDT sits in sharp contrast to other sustainable theories because it implies that firms make sustainable decisions based on power and control, compared to increased profits (Lenssen et al. 2007). The possibility of future freedoms and the ability to operate autonomously provides a firm the benefit of control over its own destiny, not beholden to external constraints.

4.2.6 Resource-Based Theory

The goal of RBT is to achieve the competitive advantage over other like firms through the use of internal resources. This is attained when a firm constructs greater value "than the marginal (breakeven) competitor in its product market" (Peteraf and Barney 2003, p. 314). RBT "emphasizes the creation, maintenance and renewal of a competitive advantage through a firm's unique resources, their characteristics, and how they change over time" (Jugdev 2004, p. 18). The logic supporting RBT is that if a firm retains valuable resources that other like firms do not have or cannot replicate, then the firm with the resource possesses the sustained competitive advantage (SCA). A firm gains its SCA over its competition through its ability to uniquely bundle and leverage its internal resources, either tangible or intangible (Barney et al. 2001; Barney and Hesterly 2012; Kozlenkova et al. 2014). In order to accomplish this, a firm's resources must be considered Valuable, Rare, Imperfectly imitable and be backed by an Organization where resources are leveraged effectively, which is also referred to as the VIRO framework (Kraaijenbrink et al. 2010; Barney and Hesterly 2012; Kozlenkova et al. 2014). The VIRO axiom is an update from the original VIRN

axiom, which substituted the phrase Non-substitutable (Barney 1991) for Organization (Barney and Hesterly 2012; Kozlenkova et al. 2014) in an effort to emphasize the need for managerial support to take full advantage of the resources and reap rewards that its competitors may be missing.

The seminal work of RBT was commenced by Wernerfelt (1984) when it was originally labelled as resource-based view of the firm, but through the initial efforts of Kogut and Zander (1992), it achieved the recognition as a theory. Kozlenkova et al. (2014) identified that the number of articles referring to RBT doubled between 2010 and 2011, while at the same time the number of articles referring to resource-based view of the firm decreased, demonstrating an increase in academic acceptance of the RBT. This study accepts RBT as a theory, but appreciates the ongoing discussion and debate on the topic (Foss 1996; Priem and Butler 2001; Kraaijenbrink et al. 2010) about the declared theory because these deliberations have the potential to strengthen future findings as academics continue the conversation.

4.2.7 Upper Echelons Theory

A firm's triple-bottom line outcome is dependent upon the demographic makeup of its management team, describes the upper echelons theory (Hambrick and Mason 1984; Stead and Stead 2008). Upper echelon theory does not imply that demographic features such as gender, age, ethnicity or education will predetermine a firm's outcome. Instead, these personal characteristics predict the "observable proxies for underlying psychological constructs that shape the way executives interpret environmental cues and how they respond to those cues" (Connelly et al. 2011, p. 93).

Management teams a re typically confronted with a vast amount of internal and external communication, the responsibility of balancing competing objectives, and meeting all regulations. These time consuming factors drive management teams to make decisions based on their cognitive values, which means it is important to recall the bounded rationality of the individuals being evaluated using the upper echelons theory (Carpenter et al. 2004). Therefore, a homogenous team is likely to suffer from "groupthink" (Connelly et al. 2011, p. 94), but a diverse team is more likely to produce innovative and creative solutions (Hambrick et al. 1996).

4.2.8 Social Network Theory

A firm's results are tied to the relationships it maintains with other organizations and individuals according to the social networking theory. In fact, a firm's social network has the potential to uncover the actions it will undertake and embrace (Borgatti and Foster 2003).

The theory implies that the number and type of dyadic ties in a firm's social network influence their organizational decisions. A firm should view its social network as a strategic map of influence and once a firm institutes sustainable activities, it should theoretically witness the diffusion of sustainable actions throughout its network (Gnyawali and Madhavan 2001). In turn, the lack of sustainable actions within a network would limit sustainable creativity and innovation.

4.2.9 Signalling Theory

In an effort to demonstrate specific qualities, firms may rely on signalling theory to establish their commitment to said qualities instead of simply publicly declaring support. Signalling theory would encourage a firm to exhibit its support for a cause and express its underlying commitment in an observable and costly manner that would be difficult for competitors to imitate (Spence 1974). These firms "may be more inclined to invest in costly signals when they know receivers are looking for those signals and are ready to act on them" (Connelly et al. 2011, p. 95). Therefore, firm looking to capitalize using signals should also be ready to invest in gathering feedback to ensure its efforts are effective and valuable (Gupta et al. 1999).

4.3 Why Resource-Based Theory was Adopted

While all of the theories outlined in section 4.2 could support a study with a focus on both sustainability and marketing, the researcher felt the theoretical foundation of RBT and its pursuit to pinpoint a firm's internal competitive advantage closely aligned with the current study. RBT maintains that competitive advantage rests in the resources a firm has access to and chooses to utilize, and not in its ability to manage the external environment (Barney 1991; Barney et al. 2011; Kozlenkova et al. 2014). Marketing studies employing RBT have increased by 500 percent over the previous decade (Kozlenkova et al. 2014), indicating the growing desire to both understand and forecast "competitive advantages and performance outcomes" (Kozlenkova et al.

2014, p. 1). In fact, the researchers contributing to the Kozlenkova et al. (2014) study concluded that evidence existed that linked "positive complementarity and synergistic effects of matching marketing resources with other firm resources and capabilities" (p. 12), making RBT a interesting lens to consider the connection between marketing and sustainability.

In addition, the study would contribute further findings to similar studies using RBT to better understand how sustainable research fits into the marketing domain (Connelly et al. 2011; Kozlenkova et al. 2014). While RBT is not specifically identified in other studies within the hospitality industry (Rondinelli and Vastag 2000; Font 2002; Noone et al. 2011; Peiró-Signes et al. 2012; Zhang et al. 2012; Chong and Verma 2013; Zhang et al. 2014), these studies allude to the importance of identifying, leveraging and bundling resources to boost a firm's competitiveness, similar to RBT. Noone et al. (2011) explain that data "can be leveraged to amplify differences in product attributes such that a hotel is not competing on the basis of price alone," (p. 297) which although not specifically identified as RBT, is the foundation of the study. Wernerfelt (2014) specifically addressed the similarities between RBT and the many marketing studies that alluded to the theory. He confirmed that the ideas underpinning RBT are "implicitly" used in marketing literature, "though often without explicit reference" (Wernerfelt 2014, p. 23) to the terminology, which implies this study's findings have the possibility to extend beyond RBT-specified literature.

In the context of this study, literature has confirmed, "earning a green certification does not automatically result in a large revenue bump nor a revenue fall. In short, green is not a 'silver bullet' strategy" (Chong and Verma 2013, p. 4). Therefore, using the RBT as the study's theoretical foundation provides a lens for the researcher to better understand the relationship between specific operating results of individual eco-certified hotels and their eWOM marketing efforts, to determine if the correlated results produce a competitive advantage. After all, an eco-certification is merely a programme designated with a marketing logo used to demonstrate a property's commitment to a set of specific environmental standards. Recognizing the diversity of subject matter, Kozlenkova et al. (2014) disclose that "RBT can integrate multiple and diverse resources into one framework to evaluate the relative and synergistic

effects of different market-based resources on performance" (p. 2). Therefore, RBT could provide the framework to better understand the basic connections and/or advantages between marketing and the results of these environmental standards.

The researcher also considered using the below theories in the study, but opted against them in favour of RBT because it better suited the aim and objectives and the findings had the potential to produce a robust foundation for future research. That said, the below theories had the potential to establish insightful findings, but were not selected because:

- Transaction Cost Economics—While this theory provides a rational, quantitative approach of predicting and explaining why firms make decisions, these firm decisions and/or behaviours are solely financial based. This theory would have provided strong results, but the researcher felt this fiscal approach would have limited the potential environmental findings if all research were directly tied to economic results. Whereas RBT allowed environmental results to be viewed independently, despite the fact that many environmental results also produce positive fiscal outcome due to consumption limitations (Porter and Van der Linde 1995). Comparing economic merit to a property's eWOM efforts is certainly a critical business component, but a comparison of a property's water and waste operating results to these same eWOM efforts could also reveal a clandestine competitive advantage behind an eco-certification. In fact, a "sustainability initiative that may appear to be a liability in a standard economic market analysis could actually be economically viable when accounting for the social consciousness of the market" (Connelly et al. 2011, p. 89). RBT simply permits the researcher to take a more holistic view in the study to better understand the broader situation.

- Institutional Theory—The theory urges firms to mimic the actions of successful firms by "conforming to institutional pressures prevailing in the environment" (Connelly et al. 2011, p. 88) because of regulatory edicts, social demands and/or economic stress. These mimicked actions become informal benchmarks for an industry as firms implement them in an effort to achieve

competitive parity, but these actions may not produce the best outcome (Magretta 1997). While the researcher recognized the importance of understanding what actions are implemented because of institutional pressures, she felt both academic and industry groups would benefit further with greater understanding about what provides competitive advantage (Porter and Van der Linde 1995) versus competitive parity.

- Social Networking Theory—The traditional sense of the theory reviews a firm's relationships between individuals, vendors and other firms to determine an organizational outcome (Jones et al. 1997). Yet the researcher considered enlisting the theory to map where eco-certified hotels connected with their customers within social media websites to determine ties that may or may not correlate with sustainable practices. At a quick glance, social networking theory appeared to be an interesting fit for the study, but further understanding about the developed theory revealed challenges because it would be difficult to determine if the strength of ties on each social media website was either weak or strong. Since "organizations make decisions based on information and influence that arise from the extent to which they are embedded in their social networks" (Connelly et al. 2011, p. 94), not fully understanding the strength of each relationship would hinder the findings. In addition, attempting to map only the social media websites that each property had a presence in would limit the findings by ignoring the holistic view of all relationships involved with the hotel. The holistic overview would certainly reveal more insight, but this review of relationships drifts beyond the eWOM marketing efforts the researcher was seeking to study.

In addition to the theoretical framework used to connect the research domains of sustainability and marketing, the researcher also considered Fuchs et al. (2000) strategic integration model, which contends that three strategic sources determine a firm's competitive advantage. The strategic integration model (figure 4.1) claims that RBT (Barney 1991; Barney et al. 2001), positioning (Porter 1980, 1996b) and process (Peters 1994) must all align to holistically explain a firm's competitive advantage over similar firms. While the use of this framework would have been insightful, the triangulation of this data extended far beyond the aim and objectives of this study

significantly delving into the human resources aspect, yet this might be considered for future research. Nevertheless, there are similarities in the theoretical underpinnings of both the selected RBT and the strategic integration model, as both view competitive advantage as the desired outcome for a firm's long-term success.

Figure 4.1 Strategic Integration Model (adapted from Fuchs et al. 2000)

4.4 Gaining Competitive Advantage

Competition is an ever-present variable for all firms, be it between firms, to attract customers, for environmental resources, for marketing attention, for talent acquisition, or for a wide-range of other concerns. Competition forces a firm's manager to convert its resources and capabilities into a valuable commodity to achieve an advantage over its competitors. The RBT provides the theoretical foundation to reveal a firm's resources and capabilities that maybe contributing to its semi-permanent competitive advantage (Barney 1991; Deephouse 2000; Barney et al. 2001; Kozlenkova et al. 2014).

This study adopted Michael Porter's definition of competitive advantage, which states:

> "Competitive advantage grows fundamentally out of value a firm is able to create for its buyers that exceeds the firm's cost of creating it. Value is what buyers are willing to pay, and superior value stems from offering lower prices than competitors for equivalent benefits or providing unique benefits that more than offset a higher price. There are two basic types of competitive advantage: cost leadership and differentiation" (Porter 1985, p. 3).

According to Porter's definition of competitive advantage, it is achieved when a firm's resources and capabilities contribute to distinctive competences that allow the firm to demonstrate its positional advantage: either cost or differentiation advantage to its customers (Porter 1985, 2008). Competitive advantage is not the act of merely being different, it is attained when a firm maintains an advantage over competitors and still achieves a positive profit margin. This advantage ultimately leads to the creation of value for a firm's customers, which is exhibited in figure 4.2. "Properly understood, competitive advantage allows you to follow the precise link between the value you create, how you create it, and how you perform" (Magretta 2012, p. 9).

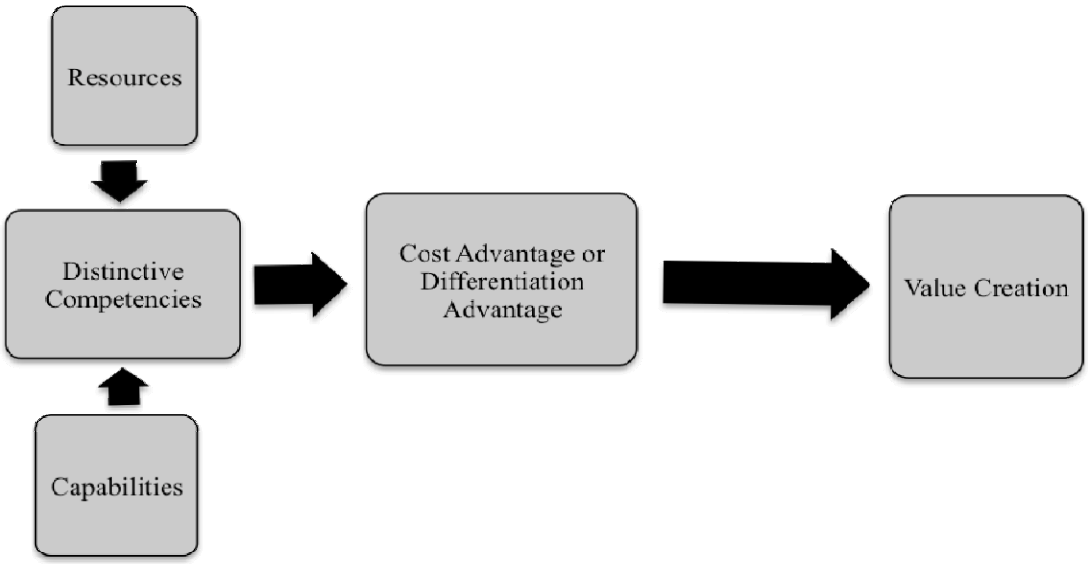

Figure 4.2 Model of Competitive Advantage (Magretta 2012)

Achieving a competitive advantage is also dependent upon a firm's position within its industry and surroundings in which it operates. A firm's position influences whether its profitability is higher or lower than the industry average (Porter 2008). As established in figure 4.2, cost advantage and differentiation are the two basic methods

to attain competitive advantage, and Porter developed three generic strategies to position a firm, which includes both of these methods and an added strategy of focus (figure 4.1). Each of the three strategies "involves a fundamentally different route to competitive advantage, combining a choice about the type of competitive advantage sought with the scope of the strategic target in which competitive advantage is to be achieved" (Porter 2008, p. 11). The generic strategies include:

- Cost Leadership—A firm establishes itself as a low-cost provider and serves a broad scope of customers that may extend beyond what is considered its traditional customers. Examples include: "economies of scale, proprietary technology, and preferential access to raw materials" (Porter 2008, p. 12). A firm looking to taking full advantage of cost leadership must "find and exploit all sources of cost advantage" (Porter 2008, pp. 12-13), which means it seeks savings for customers and also in the production of its product.
- Differentiation—A firm may choose to highlight a unique attribute that sets it apart from its competitors and in turn is rewarded with above-average prices for its exclusivity. That said, cost position cannot be ignored completely or industry competitors will attempt to replicate the unique attribute at a lower cost. Therefore, firms seeking a differentiation strategy should aim "at cost parity or proximity relative to its competitors, by reducing costs in all areas that do not affect differentiation" (Porter 2008, p. 14). There are numerous options for firms to consider as differentiators and every industry has distinctive elements that could be considered. Some options could be: a unique product line, an extraordinary marketing method, an exclusive delivery system, unmatched service, commitment to the environment and/or other charitable organizations, or even the image the firm displays (Porter 2008).
- Focus—A firm setting out to achieve a focused approach "selects a segment or group of segments in the industry and tailors its strategy to serving them to the exclusion of others" (Porter 2008, p. 15). Although this strategy seeks to narrow its customer base, it capitalizes on customer segments that are inadequately served by firms that broadly target the segment. The focus can take the form of either cost focus or differentiation focus.

Porter (2008) warns firms against being "all things to all people" (p. 12) when developing a strategy. Instead, the leaders of a firm must establish the type and scope of competitive advantage, as described in the previous three bullet points, it wishes to attain or risk "strategic mediocrity and below-average performance" (p. 12).

Table 4.1 Three Generic Strategies to Achieve Competitive Advantage
(Adapted from Porter 2008)

		Source of Competitive Advantage	
		Lower Cost	Differentiation
Competitive Market Scope	Broad Target	Cost Leadership	Differentiation
	Narrow Target	Focus	
		Cost Focus	Differentiation Focus

While the three generic strategies depicted in table 4.1 may improve a firm's chances of achieving competitive advantage, each of the strategies does involve inherent risks that firms should be prepared to overcome should the need arise. The risks are illustrated in table 4.2. Prepared firms develop competitor barriers, but also recognize that its strategy must evolve and advance over time to stave away industry competition.

Table 4.2 Risks of Generic Strategy (Porter 2008)

Risks of Cost Leadership	Risks of Differentiation	Risks of Focus
Cost leadership is not sustained if: • Competitors imitate • Technology changes • Other bases for cost leadership erode Proximity in differentiation is lost	Differentiation is not sustained if: • Competitors imitate • Bases for differentiation becomes less important to buyers Cost proximity is lost	The focus strategy is imitated The target segment becomes structurally unattractive: • Structure erodes • Demand disappears Broadly-targeted competitors overwhelm the segment: • The segment's differences from other segments narrow • The advantages of a broad line increase New focusers sub-segment the industry

Both Porter (1985, 2008) and RBT researchers (Kozlenkova et al. 2014; Connelly et al. 2011; Barney and Arikan 2001; Barney 1991) use the terminology of resources and capabilities in developing the foundation of competitive advantage. Resources are "something that a firm possesses" (Hart and Dowell 2011, p. 1465) that can consist of:

- financial assets,
- physical features,
- employee skills,
- brand and trademark equity,
- reputation of the firm, and
- customer base.

Capabilities are "something a firm is able to perform" (Hart and Dowell 2011, p. 1465) such as standardized routines and unique practices. Capabilities can also be described as the ability to use a firm's resources efficiently. Together, resources and capabilities collectively generate a firm's distinctive competencies.

"However, a resource-based approach to strategy is concerned not only with the deployment of existing resources, but also with the development of the firm's resource base" (Grant 1991, p. 131). Therefore, a firm that embraces both current resources but remains focused on the development of future resources has the potential to achieve a competitive advantage, which is known as identifying "resource gaps" (Grant 1991 p. 131). Ideally, this dual focus on the present and future will lead to prolonged success and potentially a sustained competitive advantage over competitors.

While a competitive advantage is desirable, a SCA should be the objective of a firm. Armstrong and Shimizu (2007) declare that a competitive advantage is reached when a firm "can produce more economically and/or better satisfy customer needs, and thus enjoy superior performance relative to its competitors" (p. 961). Whereas, an SCA is achieved when a firm creates "more economic value than the marginal firm in its industry and when other firms are unable to duplicate the benefits" (Barney and Clark 2007, p.52). The RBT asserts that in order for a firm to achieve an SCA, the resources and capabilities must be considered valuable, rare, imperfectly imitable and be backed by an organization where resources are leveraged effectively by its managers (Kraaijenbrink et al. 2010; Barney and Hesterly 2012; Kozlenkova et al. 2014).

This study values the validity critiques of SCA (Kraaijenbrink et al. 2010; Fiol 1991) under the RBT, but concludes that while SCA may not be permanent, it remains a compelling strategy. Striving to achieve even a "temporary competitive advantage" (Kozlenkova et al. 2014, p. 3) forces a firm to "keep on innovating as its revenue stream is constantly exposed to new competitors, substitute products and so forth" (Kraaijenbrink et al. 2010, p. 354).

4.5 Competitive Advantage within Eco-Certification Programs

In the case of this study, the firm resources and capabilities under consideration were the environmental, economic outcomes and social media presence of the FGLP eco-certified properties, and the researcher sought to evaluate if the social media presence might predict a relationship that could impact the environmental and economic

competitive advantage of FGLP hotels. Porter (2008) clarified that competitive advantage "explores the role of complementary products and service" (p. xvi), which is what this study is attempting to establish for eco-certified hotels.

The findings also provide a foundation of understanding, to determine what competitive benefits the FGLP offers its certified properties. In addition, both the primary contact at each eco-certified hotel and the FGLP have the potential to contribute to the understanding of whether cost leadership or differentiation (Porter 1985) is the type of competitive advantage that is obtainable via eco-certification.

As chapter three established, marketing efforts have moved beyond the traditional print and broadcast outlets to also include interactive applications to communicate with customers utilizing social media in an Internet-based environment. Such electronic communication is transforming the way firms operate (Frank 1997; Constantinides and Fountain 2008) and it is revolutionizing the way firms implement marketing efforts in many industries (Frank 1997; Coulter et al. 2012; Xiang et al. 2014).

While eco-certifications were not developed specifically for marketing in an online environment, these logos were designed as a "meaningful marketing tool" (Gross et al. 2014, p. 166) to influence "consumer decision-making" (Deng-Westphal et al. 2015, p. 234) in an online environment about a firm's commitment to environmental and/or social standards. This is an opportunity to attract the 55 percent of the global population that is willing to pay a premium for services and products from firms that demonstrate this commitment (Nielsen 2014). This is a growing group, as it was hovering at 50 percent in 2012 and only 45 percent in 2011(Nielsen 2014).

Historically, hotels considered the Internet to have two functions, supplying compelling one-way information to consumers and the ability for consumers to finalize a purchase (Middleton and Clarke 2001). Yet, "the tremendous growth of the Internet has fundamentally reshaped the way the tourism product is distributed and the way people plan for and consume travel" (Xiang et al. 2008, p. 2). Now, the ever-adapting Internet enables and encourages the exchange of two-way communication

via social media applications, which has broadened a hotel's reach in the online environment. It is also another competitive channel, which could act as a competitive advantage or potentially a disadvantage. In fact, "interpersonal influence and word-of-mouth are ranked the most important information source when a consumer is making a purchase decision. This influence may be especially important in the hospitality and tourism industry, whose intangible products are difficult to evaluate prior to their consumption" (Litvin et al. 2008, p. 458).

A Harvard Business Review podcast explained "senior leaders need to recognize the value of social media and mass collaboration, across multiple business functions, not just marketing, and think of it as strategic to their business" (Piskorski and Bradley 2011). While the marketing mediums have evolved over time to now include web-based platforms, Peter Drucker (1955, 1973, 1994, 2007) habitually proffered that marketing was also the responsibility of management and should not be considered an autonomous sales and/or communication function. Management's holistic view of a firm should theoretically allow them to emphasize and/or conceal features in its marketing efforts to attract and retain customers in an effort to achieve competitive advantage, that may be unknown if the function was sequestered to a lone department. In addition, since a firm's bottom line and long-standing existence is dependent upon attracting and retaining customers, a firm's management has an inherent obligation to participate in the marketing process.

Marketing is not the only research domain that generates a competitive advantage. Adopting sustainable practices at a firm also produces comparable advantages (Menon and Menon 1997; Sharma and Vredenburg 1998; Wu 2009; Connelly et al. 2011). "Sustainability is now viewed as an effective way for the firm to differentiate its offerings and to achieve a position of competitive advantage" (Connelly et al. 2011, p. 87). While advantages extend to the elements incorporated in the triple-bottom line, Hart (1995) warned that natural resources were overlooked in the proposed RBT framework and established NRBV (explained in section 2.4). NRBV incorporates environmental and social elements in a firm's ability to achieve a competitive advantage. Even fifteen years later, Hart and Dowell (2011) still contend that the omission of the "natural environment could create a serious constraint on

firms' attempts to create sustainable advantage" (p. 1465).

In an effort to guide firms to an environmentally sustainable future, consumption and production patterns must be viewed as a means to deal with the growing concern (Rex and Baumann 2006). While it is critical for individual firms to observe its patterns on a micro level, it is equally important for these observations to be made on macro level to ensure that voluntary and/or mandatory EMS can be implemented to combat emerging concerns (Rex and Baumann 2006). In the case of this study, the voluntary eco-certification program operated by the FGLP requests that individual hotels submit various consumption metrics every three years. This data permits both a micro level assessment by each eco-certified hotel, and also a macro level assessment by the FGLP government officials, which ultimately encourages beneficial modifications that could lead to an increased competitive advantage.

4.6 Conclusion

The theoretical foundation of this study was established after a review of previous research connecting the topics of sustainability and marketing within the strategic management field of study. RBT was selected as a viable foundation to better understand where the competitive advantage of eco-certifications resides and how it might be enhanced to improve the overall value of eco-certifications within the hospitality industry, both for eco-certified hotels and the supporting eco-certification program. The next chapter presents the study's methodology, which was developed based on the literature presented in the previous three chapters and the challenging circumstances that surround the evolving FGLP eco-certification.

Chapter Five

Methodology

5.1 Introduction

Building on the evidence included in the literature review, the methodology chapter presents the philosophical framework and the critical tools used in this mixed-methods study. The pragmatic paradigm justified the research components selected to sample and the procedure to analyze the findings. The study components were compiled in response to gaps in the research related to marketing and sustainability as noted in chapter one, with the expectation of better understanding the relationships among environmental performance, economic results and social media presence that contribute to the competitive advantage of eco-certified hotels.

5.2 Aim and Objectives

The aim is:

- To investigate whether there is a relationship among environmental performance, economic results and social media presence that contributes to the competitive advantage of Florida Green Lodging Program (FGLP) eco-certified hotels.

The objectives are:

1. Review the literature about sustainable tourism and the use of s4ocial media and marketing within the hospitality industry;
2. Evaluate the environmental and economic performance reported by FGLP eco-certified hotels;
3. Identify the social media presence and participation of hotels in the FGLP to discover how each property connects with the public in today's electronic environment;
4. Analyze the data to determine if relationships exist between environmental performance, economic results and social media presence at FGLP hotels; and
5. Determine if the findings contribute to the competitive advantage of FGLP hotels.

Objective one established a literature review of the related topics and allowed the researcher to develop the underpinnings of the study based on previous research about sustainable tourism and the use of social media and marketing within the hospitality industry.

A combination of primary and secondary data were compiled to fulfil the second objective, which sought to evaluate the environmental and economic performance reported by FGLP eco-certified hotels. Secondary data was first sought from the FGLP to establish a list of certified hotels within the program, which was also bolstered with the supporting information from each property that was included in the 24-page FGLP application submitted in January 2014. The economic performance insight was collected via electronic survey and was paired with the corresponding FGLP application information. The electronic survey also collected open-ended responses from respondents and requested their participation in interviews to enhance the quantitative findings with examples and opinions. All of the data were submitted to descriptive analysis, frequency distributions and prepared for additional analysis.

Based on the literature review, objective three identified social media sites where previous research indicated the presence and participation of the hospitality industry with its customers with a focus on sites that promoted a collaborative environment and/or UGC (Kotler et al. 2006; Kaplan and Hanlein 2010; Chan and Guillet 2011; Anderson 2012; Leung et al. 2013). Numerical data for each FGLP hotel was collected from the selected social media sites to determine how and where the public was able to connect with each property via its social media marketing efforts.

Objective four was the culmination of data from 52 FGLP eco-certified hotels, which contributed data from the FGLP applications, social media investigation and electronic survey results. In an effort to uncover statistical relationships between the annual sustainable results and the social media presence and participation for each hotel property, data analysis occurred using regression analysis to determine the most robust model for each research question "based on a purely mathematical criterion" (Field 2013, p. 322). Content analysis was also applied to the qualitative findings collected via open-ended responses and a dialog with an FGLP primary contact.

The final objective examined the quantitative and qualitative data to determine how the results relate, which was used to produce both theoretical and practical results tied to the RBT and the competitive advantage of eco-certified properties. The study findings were evaluated and compared with previous research, which further extended knowledge of sustainable tourism and the use of social media and marketing within the hospitality industry. The descriptive analysis of the social media presence, combined with the data collected from the FGLP properties, offered insight that has never been distributed publicly and therefore the reporting and analysis of the data provide original findings and the foundation for future research.

5.3 Hypotheses

Following the development of the study's aim and objectives, six research hypotheses were constructed based on the literature review and the recommendation of convergence of both marketing and sustainability research in the special edition of the Journal of the Academy of Marketing Science (2011: 39). While these topics are prevalent in many business sectors, the tourism industry was selected as a rich research environment because it is one of the top employers in the United States and one of the top ten industries in 48 of the country's 50 states (AH&LA 2013b), making it possible to achieve widespread fiscal and environmental impact. The following hypotheses were posed for testing and are also depicted in figure 5.1.

1. There is a positive relationship between social media and the revenue per available room (RevPAR).
2. There is a relationship between social media and the percentage recycled, reused and/or composted offset by the overall waste.
3. There is a relationship between social media and the cost of all water per guest room.
4. There is a relationship between social media and the cost of all waste per guest room.
5. There is a relationship between social media and the cost of all energy per guest room.
6. There is a positive relationship between the environmental performance of a hotel (water, waste, energy and percentage recycled) and RevPAR.

The first hypothesis sought to better understand the relationship between social media and RevPAR and expand upon Anderson's (2012) findings that confirmed the positive relationship between the social media website, TripAdvisor and RevPAR. The positive directional prediction of the hypothesis is based on Anderson's (2012) study, which was the "first to perform an assessment of the influence of social media upon hotel performance" (p. 7). Although the Anderson study (2012) did not articulate the use of a specific theoretical framework, it provided a goal of understanding how the "increasing role of social media…leads to hotel pricing power and revenue generation," (p. 7) which emulates the RBT theoretical foundation used in this study for "explaining and predicting the basis of a firm's competitive advantage and performance" (Kozlenkova et al. 2014, p. 21).

Hypotheses two through five all aimed to understand and establish if a relationship existed between social media and a particular utility at an eco-certified hotel. No directional prediction was specified for any of these hypotheses due to the exploratory nature of the included content and the lack of research between the topics. Therefore, these hypotheses held the potential to establish a foundational understanding between the topics, which reinforced that, "marketing must bring in fresh perspectives, concepts, and theories to address the changing role of marketing in this rapidly changing environment" (Connelly et al. 2011, p. 87).

The final hypothesis included a positive directional prediction between the environmental performance of a hotel (water, waste, energy and percentage recycled) and RevPAR, which was based on similar research of product-based eco-certifications and studies set within the hospitality industry. The previous research demonstrated that adopting higher environmental standards via an eco-certification produced a price premium and operational savings (Rondinelli and Vastag 2000; Delmas and Grant 2014), although this research within the service industry is in the early stages (Zhang et al. 2014). Still, a 2012 study (Zhang et al. 2012) confirmed a positive association between environmental outcomes and financial performance at hotels in the United States, which reinforced earlier operational efficiency findings at eco-certified hotels (Butler 2008). Peiró-Signes et al. (2012) also found a connection in Spanish hotels

that indicated a positive relationship between eco-certified hotels and fiscal results compared to non-certified hotels. That said, Chong and Verma (2013) found revenue neutral results compared to a hotel's environmental performance establishing the foundation for further testing in this study. In addition, testing the sixth hypothesis will also assess the FGLP's claim that the certified hotels will benefit the environment through conservation and efficiency practices, and help "designated properties save money and increase occupancy rates. By reducing water and energy use and reducing waste generation operating costs go down" (FGLP 2013).

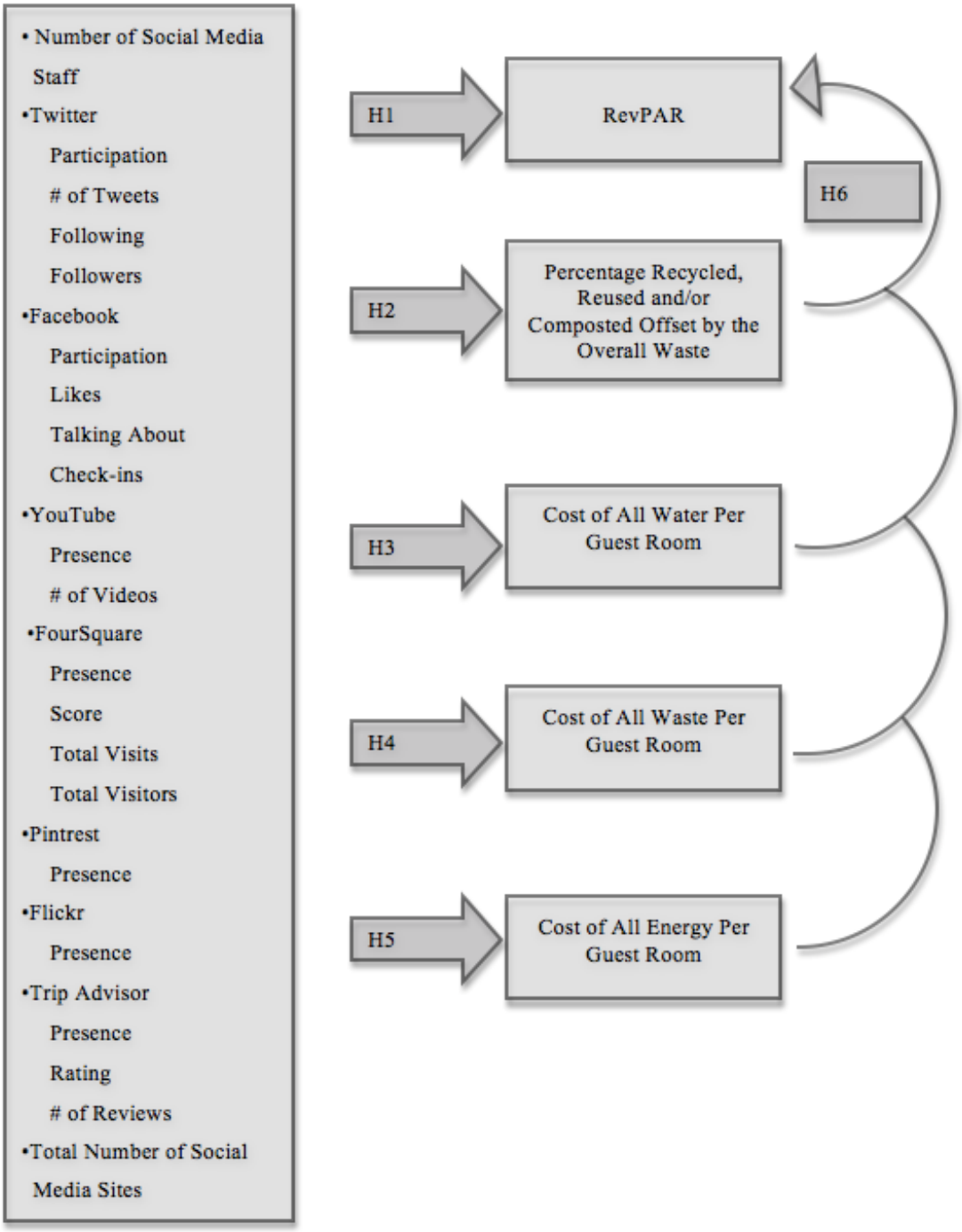

Figure 5.1 Theoretical Framework Used to Determine the Relationship Among Environmental Performance, Economic Results and Social Media Presence

5.4 Philosophical Foundation

The development of knowledge throughout this study is related to the philosophical foundation established at the start of the research, which was built upon a strategy and methods guided by epistemological and ontological assumptions (Guba and Lincoln 1989; Grix 2001) to make both theoretical and practical contributions. The literature review influenced the philosophical views and research methods described in remaining sections of this chapter. The philosophical foundation of the study provides the underpinning for both the research design and the methods used to collect and analyse the data. It is a "set of assumptions, concepts, values and practices that constitutes a way of viewing reality" (McGregor and Murnane 2010, p. 419).

The quantitative outcomes of the hypotheses provided the foundational understanding about how and if the variables contribute to the competitive advantage of eco-certified hotels through the scope of RBT, which was then further supported by quantitative findings. The specific research methodology and design was preceded with the designation of the ontological and epistemological assumptions. Ontology is concerned with the study of existence, reality and being and epistemology is concerned with the nature of how knowledge is acquired (Guba and Lincoln 1994). While the quantitative portion of this study matches the objectivist ontological stance that "asserts that social phenomena and their meanings have an existence that is independent of social actors" (Bryman 2003, p. 22), the secondary qualitative portion of the study supported the constructivist ontology which "asserts that social phenomena and their meanings are continually being accomplished by social actors" (Bryman 2003, p. 23). Fortunately, the mixed methods methodology permits the use of both philosophical worldviews to ensure the research question remains the focus (Tashakkori and Teddlie 1998).

The epistemological stance of this study is also divided among the quantitative and qualitative portions of the research, but mixed methods allows for the integration of both the objective and subjective points of view. This study leaned toward the positivist epistemological view for the statistical investigation of the relationships, but

depended on the interpretivist view for the consideration of the qualitative data (Tashakkori and Teddlie 1998). Throughout the study, a mixed methods balance is also maintained in the recognition of values in interpreting the results as well as the acceptance of both deductive and inductive logic in the study (Tashakkori and Teddlie 1998).

5.5 Research Methodology, Paradigm and Design

A mixed methods strategy was adopted for this study to address the aim and objectives outlined in section 5.2. Mixed methods research is "an intellectual and practical synthesis based on qualitative and quantitative research" (Johnson et al. 2007, p.129) and is recognized as the third methodological movement (Tashakkori and Teddlie 1998; Teddlie and Tashakkori 2009). It holds the freedom to select the most appropriate research methods and design to achieve "satisfying and fulfilling" (Cherryholmes 1999, p. 5) results.

The researcher considered the resources available and the information that had to be collected to achieve the study's aim, which led to the recognition that a strict qualitative or quantitative methodology could impact and possibly limit, the findings. Instead, the mixed methods strategy allowed the researcher to "draw liberally from both quantitative and qualitative" (Creswell 2009, p. 10) methodologies used while collecting and analyzing data with the intention of cultivating new knowledge (Morgan 2007). Mixed methods permitted the researcher to use existing numeric data collected via annual FGLP applications and each hotel's online presence, while also seeking opinion-driven context directly from eco-certified properties. In addition, the use of a mixed methods approach was well suited for a study within sustainable tourism because it could "purposefully promote societal change…to demonstrate the potential social and economic consequences of an environmental issue" (Molina-Azorin and Font 2015, p. 17).

Mixed methods research is not without its critics who disagree about the theoretical issues that were thought to exist within the methodology. Much of the debate, commonly referred to as the paradigm wars, occurred between positivist and constructivist and began in the early nineteenth century but reached a peak during the

decades of 1960-1980 (Tashakkori and Teddlie 2003, 1998; Creswell and Plano Clark 2007). “No discipline in the social and behavioral sciences has avoided manifestations of these paradigm wars” (Tashakkori and Teddlie 1998, p. 4), but the theoretical debate proved to be beneficial for not only pragmatism but also the academic fodder that occurred on behalf of positivist and constructivist. Tashakkori and Teddlie (1998) further explain that the wars were “positive for the research development in many fields because most researchers now use whatever method is appropriate for their studies, instead of relying on one method exclusively” (p. 5).

Historically, mixed methods underwent a period of five stages of development that brought it to its current application. The stages included: the formative period, the paradigm debate period, the procedural development period, the advocacy and expansion period, and the reflective period (Creswell and Plano Clark 2011). The evolution of mixed methods has been ongoing since the 1950’s, but development provided “multiple ways of seeing and hearing” (Greene 2007, p. 20) how the methodological design interacted with various academic disciplines and research domains. The decades of philosophical and practical discussion considered what methods could be employed and the most suitable theoretical foundation to bolster a mixed methods study. While the current reflective period still embraces the critical critique of the “third research paradigm” (Johnson and Onwuegbuzie 2004, p. 15), it also equally supports the ongoing evaluation of mixed methods studies and its future advancement (Creswell and Plano Clark 2011).

As more sustainable tourism researchers employed the use of mixed methods in their studies, as established in the increasing number of mixed methods articles on the topic in the previous five years, (Molina-Azorin and Font 2015) the proposal of multiple paradigms incorporated in this study not only made practical sense, but could also be theoretically sound using the pragmatic paradigm as the philosophical foundation (Tashakkori and Teddlie 1998; Creswell 2009). Whereas, positivism and constructivism were the standard foundations employed for strict quantitative and qualitative studies. Instead, pragmatism “rejects the either-or of the incompatibility thesis” (Tashakkori and Teddlie 1998, p. 23) that would exist if a researcher were forced to apply the traditional paradigm for exclusive quantitative and qualitative

research. Pragmatism "embraces both points of view" (Tashakkori and Teddlie 1998, p.23) and allows for both deductive and inductive logic, both objective and subjective points of view, and recognizes that values are important to consider when interpreting results (see table 5.1).

Table 5.1 Comparisons of Paradigms used in the Social and Behavioural Sciences (Tashakkori and Teddlie 1998)

Paradigm	Positivism	Pragmatism	Constructivism
Methodology	Quan	Quan + Qual	Qual
Logic	Deductive	Deductive + Inductive	Inductive
Epistemology	Objective point of view. Positivist view	Both objective and subjective points of view.	Subjective point of view. Interpretivist view
Axiology	Inquiry is value-free	Values play a large role in interpreting results.	Inquiry is value-bound.
Ontology	Naïve realism/Objectivist	Accept external reality. Choose explanations that best produce desired outcomes.	Relativism/Constructivist
Causal Linkages	Real causes temporally precedent to or simultaneous with effects.	There may be causal relationships, but we will never be able to pin them down.	All entities simultaneously shaping each other. It's impossible to distinguish causes from effects.

Pragmatism allowed the study to use "what works" (Tashakkori and Teddlie 1998, p. 21) best to create the unique research design to identify the potential relationships outlined in the study's aim while valuing both the quantitative and qualitative findings "because they collectively yielded a better story" (Molina-Azorin and Font 2015, p. 14). The methodology and supporting paradigm of the study valued both the "practical relevance" (Brannen 2005, p. 6) and the "theoretical relevance" (Brannen 2005, p. 6) that coexist with this mixed methods and pragmatic foundation.

Incorporating the research elements of both quantitative and qualitative approaches in a complementary manner, the researcher employed an explanatory sequential design

for this mixed methods study. This design considered the implementation of the approach and the prioritization of the methods used to collect the data. Such a strategy permitted the collection, analysis and interpretation of both numeric and opinion-based findings with a dominant emphasis on the statistical relationships established during the first phase of the study. Utilizing Creswell's (2009) typology and mixed methods planning procedure, the following approach was implemented:

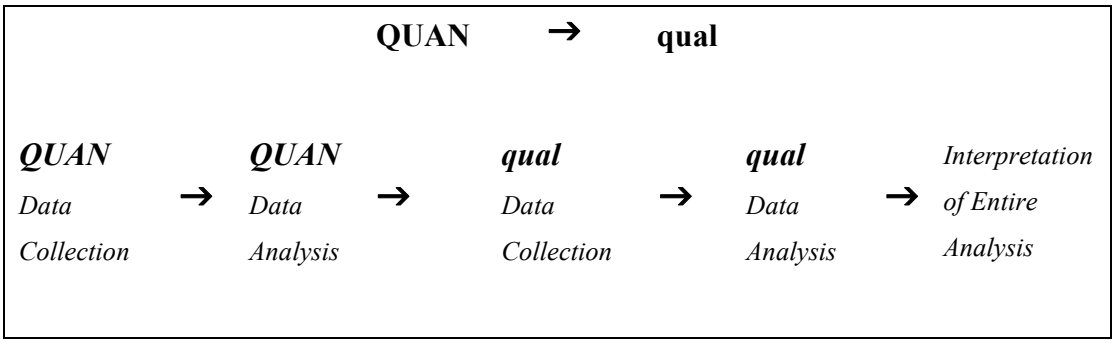

Figure 5.2 Sequential Explanatory Research Design (Creswell 2009, p. 209)

The basis of the study was to determine if a particular combination of operational results and social media presence contribute to the competitive advantage of an eco-certified property. This mixed methods endeavour was organized in two phases; a quantitative dominant phase that was followed up with a supportive qualitative phase. In the first phase, data from the FGLP were analyzed to determine if relationships existed. Next, the qualitative phase provided supportive data to better comprehend the statistical findings discovered in the first phase.

When selecting the appropriate research design for this study, the researcher had approximately forty mixed-methods designs to consider (Tashakkori and Teddlie 2003). Creswell (2003, 2009) narrowed the design selection down to the six major strategies and he provided four influential aspects to consider in the selection of a research design: timing, weighting, mixing and theorizing. Employing Creswell's planning procedures, depicted in figure 5.2 and further explained in table 5.2, the study's sequential explanatory design consisted of:

1. Sequential-Quantitative First (timing)
2. Quantitative (weighting)
3. Connecting (mixing)
4. Implicit (theorizing)

A sequential explanatory design was determined to have the most fitting characteristics to address the study's aim and answer the hypotheses. The researcher did opt to amend Creswell's (2009) recommended design procedure for mixing and instead used a connecting strategy because this design allowed the qualitative findings to enhance the quantitative findings and produce stronger results.

Table 5.2 Aspects to Consider in Planning Mixed Methods Design (Creswell 2009, p. 207)

Timing	Weighting	Mixing	Theorizing
No Sequence Concurrent	Equal	Integrating	Explicit
Sequential-Qualitative First	Qualitative	Connecting	
Sequential-Quantitative First	Quantitative	Embedding	Implicit

While the sequential explanatory strategy offers many advantages, it also challenges researchers with the length of time and the resources required in the completion of two separate phases of inquiry (Bryman 2007; Creswell 2009; Creswell and Plano Clark 2011). To that end, the researcher placed a greater emphasis on the quantitative first phase of research and used data analysis software to aid in the correlation of information.

5.6 Constructing the Research Sample

The theoretical population of the study included all voluntary, eco-certified hotels in the United States, however a refined target population was determined by using exclusionary and inclusionary criteria. There is currently no national green tourism initiative in the United States (Ernst & Young 2008) and as of July, 2013 there were 22 states (AH&LA 2013a) out of a total of 50 states in the United States that have state-specific hospitality eco-certifications documented by the "national association representing all sectors and stakeholders in the lodging industry" (AH&LA 2013a). Of the 22 represented states presented in table 5.3, only 19 of these eco-certification programs incorporated a graphic eco-label to aid certification sites in its marketing efforts. The eco-label, being the marketing brand of the certification program (Mihalic 2000; Deng-Westphal et al. 2015), was an inclusionary criterion considering the

study's focus on marketing efforts. Now that the potential target sample pool was narrowed to only 19 states, the researcher sought to identify the states that were top travel destinations for both domestic and international tourists as well as a state where the travel industry was a top employer. This tourism criterion ensured that the target sample was rich with information and the findings might have a greater economic, environmental and social impact to a particular state.

Using data collected by the U.S. government census bureau and the U.S. Travel Association, the potential sample are depicted and scored in table 5.3.

Table 5.3 State Eco-Certification Overview (22 States)

States with a Hotel Eco-Certification Program*	Eco-Certifications with an Eco-Label**	Travel Industry Employment Ranking within States***	Ranking of States Visited by International Travellers***	Ranking of States Visited by Domestic Travellers*****
Arizona	Yes	4	13	18
California	Yes	6	3	1
Connecticut	Yes	9	_	26
Delaware	Yes	9	_	51
Florida	Yes	3	2	2
Georgia	No	5	11	9
Hawaii	No	1	5	25
Illinois	Yes	7	8	5
Maine	Yes	5	_	43
Maryland	Yes	8	_	17
Massachusetts	Yes	11	7	15
Michigan	Yes	8	_	13
Missouri	Yes	8	_	19
New Hampshire	Yes	9	_	40
North Carolina	Yes	6	17	11
Oregon	Yes	6	_	28
Rhode Island	Yes	12	_	50
South Carolina	Yes	5	_	22
Tennessee	Yes	6	_	14

Vermont	Yes	4	_	49
Virginia	Yes	5	15	8
Wisconsin	No	8	_	23

* American Hotel and Lodging (AH&LA 2013a)
** Individual web inspections by the researcher conducted August 2013
*** U.S. Travel Association 2012
**** U.S. Census 2012--Utilizing 2009 data, which is inclusive of all U.S. states and territories *(Note—the missing data indicates too few international travellers visited the state to meet the statistical standards set by the U.S. government)*
***** U.S. Census 2012--Utilizing 2009 data, which is inclusive of all U.S. states and territories

The findings from table 5.3 highlighted three states for consideration. These three states were ultimately determined based on the strong tourism presence that each possessed. Next, each of the three state eco-certification programs were examined to better understand how the program was administered, what sustainable information was tracked for each hotel property, the access the researcher would have to the information, and the marketing efforts offered by each program. The state-specific findings are presented in table 5.4. The researcher considered elements of all three state programs in the study, but the information available for each program varied greatly, which would not allow exact comparisons to be made between programs. Instead, Florida's eco-certification program, consisting of 689 certified properties (FGLP 2013), was chosen for further research because of the following factors:

- The quantitative information submitted by each certified property;
- The guaranteed access to all of the data "is a critical sustainable strategic management activity" (Stead and Stead 2004, p. 193).
- The marketing support already provided to FGLP hotels demonstrated its on-going commitment to branding and indicated a possible venue to implement the researcher's findings;
- The sizable number of certified hotels preliminarily revealed within the state provided a large research pool for consideration; and
- The importance of the travel industry to the state's economy (U.S. Census 2012; U.S. Travel Association 2012).

Table 5.4 **State Eco-Certification Overview (3 States)**
(Data were collected by reviewing the program websites (CDGS 2013; FGLP 2013; IHLA 2013) and email conversations (May 2013; Shearer 2013a, 2013b; Teel 2013) between May-October 2013.)

	California	Florida	Illinois
Year Established	2004	2004	2008
Name of Operator	California Department of General Services	Florida Department of Environmental Protection	Illinois Hotel and Lodging Association
Type of Operator (*government, non-government, industry, partnership, etc*)	Government	Government	Trade Group
Number of Certified Hotel Properties	206	689	55
Certification Approved by (*self certified, operator certified, third-party certified*)	Self Certified and On-Site Audit Every 3 Years	Self Certified with "Spot Assessments" (Shearer 2013a)	Self Certified
Certification Fee	$500 every 3 years	$0	$25-$100 depending on property size
Duration of Certification	3 years	3 years (with annual reports)	Indefinite
Ongoing Monitoring of Eco-Certification	Yes	Yes	No
Eco-Certification Marketing Efforts			
Graphic Logo of Eco-Certification Program	X	X	X
Website	X	X	X
Provide Visual Recognition of Certification for Property to Display	X	X	X
Provide Electronic-Version of Logo for Properties to Use	X	X	X

Provide Social Media Tools or Plan	_ □	_ □	_ □
Provide Ready-to-Use Marketing Material to each Property	_ □	X	_ □
Sustainable Criteria for each Property			
Provide Hotel Description (square footage, number of rooms, etc)	X	X	X
Occupancy Rate	_ □	_ □	_ □
Social Efforts (employee, community, etc)	_	_	_
Track Recycling Efforts (weight, cost, etc)	_	X	_
Track Waste Usage (weight, cost, etc)	_	X	_
Track Water Usage (gallons, cost, etc)	_	X	_
Track Energy Usage (wattage, cost, etc)	_	X	_
Timeline that Environmental results are Submitted	Every 3 years	Every 3 years	Only one time
Access to Each Property's Results			
Available Online	No	No	No
Available via Program Officials	Yes-"a request can be made through the California Public Records Act" (May 2013)	Yes-"all government documents are considered public records" (Shearer 2013a)	No—"not at this time" (Teel 2013)

The exclusionary criteria used to determine the target sample was based on the study's original aim, but was also rooted in practical decision-making. While a singular focus is arguably a weakness of investigating a specific location because it may not be applicable to the general sample, the researcher recognized that other eco-certification studies (Rivera 2002; Rivera and De Leon 2004; Claver-Cortés et al. 2007; Prakash and Potoski 2007; Dief and Font 2010; Chan and Guillet 2011; Shan and Taylor 2014;) have focused on a specific location with the intent of discovering useful insight to be generalized in similar populations and/or locations. Based on like-research, the FGLP findings were expected to be transferable to the other 21 eco-certification programs for the hotel industry operating within the United States, with

the potential to extend beyond the country's borders to other eco-certification programs. Yin (2003) explained that a research sample that investigates an individual instance of a broader phenomenon could reveal robust and intricate insight about the phenomenon.

5.7 Research Methods and Design

The terminology of methods and methodology are often used interchangeably, which is unfortunate because they are distinctly different. While the methodology involves the study's philosophical underpinnings, method refers to the tools and procedures used in the study to collect and analyze the research (Creswell 2009; McGregor and Murnane 2010). This study adopted a mixed methods approach starting with both primary data collected from web-based surveys and secondary data garnered from government forms and social media websites for the quantitative portion of the study. The qualitative segment of the study included open-ended questions requested in a web-based survey. The use of the survey as a research instrument is linked with the deductive approach for specific data and an inductive approach for the open-ended questions, which is widely used in business studies (Collis and Hussey 2013). The contribution of the survey data in this study enhanced the secondary data and provided a more robust foundation of data to be analysed.

The data collection and analysis addressed in objectives two, three and four built upon the previous research studies conducted by Drucker (1955, 1994, 2007), Varadarajan (1992), Menon and Menon (1997), Webster (2009), Dief and Font (2010), Connelly et al. (2011) and Anderson (2012), which considered how sustainability fits within the marketing domain. The research design, outlined in table 5.5 and further described in sections 5.7.1—5.7.2, lays out the premeditated scheme of investigating the study's hypotheses (section 5.3) with a focus on the study's aim.

Table 5.5 Research Design of the Study

Phase	Procedure	Product
Data Collection	Review of Secondary Data • FGLP Applications • Social Media Review of Primary Data • Web-Based Survey • Interview	Quantitative and Qualitative Variables
Data Analysis	Frequency Distributions Central Tendencies Backward Regression	Descriptive Statistics Correlated Findings Regression Models
Results	Interpretation of both the Quantitative and Quantitative Findings	Contribution to Knowledge Implications Future Research

5.7.1 Data Collection

The literature review, which was established in sustainable tourism, social media and theories that unite both subject matters, revealed a gap in the research domain of eco-certifications within the hospitality industry. And while eco-certification programs where not initially established for use within social media environments, the graphic logo representing each program was established as a "meaningful marketing tool" (Gross et al. 2014, p. 166) to demonstrate a firm's commitment to environmental standards. Therefore, gaining the understanding of what attributes connect marketing and environmental outcomes from hotel utilities, holds the possibility to garner insightful results for firms that commit to eco-certification standards and ultimately achieve a competitive advantage over its competitors.

The data collection is the first step in bridging the gap in literature. Yet, determining what data to collect was based on both theoretical and practical investigations. The data collection is one portion of the overall research design that operates on the assumption that all research is an interconnected arrangement of steps (Sekaran 2000).

While no step is more important than the next, providing a robust foundation of statistics institutes a strong underpinning of data for the current study and for future investigations. The data collection was organized into three specific categories to garner information to determine the results of the hypotheses (section 5.3):

- The first set of data was extracted from the self-assessments of 81 FGLP applications submitted in January 2014 by each eco-certified hotel to the governing body. This secondary data source provided 40 individual descriptions about each property and its utility consumption behaviour along with the responses to 237 corresponding program-related questions resulting in 22,437 variables for the study's sample.
- The second data set was an extension of the information submitted on the 81 FGLP applications. An assessment of the social media presence was amassed for each of the participating properties that resulted in 1,701 pieces of secondary data. This followed a research protocol outlined in section 5.7.1, which was an adaption of Chan and Guillet's (2011) study about social media within the hospitality industry. The data was collected in September 2014.
- The third set of data was comprised of primary research collected from 63 percent of the FGLP hotels, which consisted of 52 respondents. The insight collected via electronic survey, and consisted of two Likert-based questions, three questions seeking a numeric response and two open-ended, optional questions (see appendix five for survey questions). The web-based survey collected responses from November 11 - December 19, 2014.

5.7.1.1 FGLP Application

Despite the number of certified hotels displayed on the FGLP website, which publicly claimed 689 (FGLP 2013), the government agency had only collected 98 certification applications since 2011. The application was not only used to certify new hotels, it was also used to confirm the ongoing certification of existing FGLP hotels every three years. The 98 applications were submitted in January 2014, but only 81 were complete and therefore included in the study's sample. The numeric disparity is addressed in section 5.9. The 81 properties included in the study consisted of 82 percent of the total of facilities that submitted a certification application in 2014, 11.8

percent of the 689 claimed to be certified by the FGLP (FGLP 2013) and 1.7 percent of the 4,689 lodging facilities in the state of Florida (FDBPR 2014).

The FGLP applications were provided to the researcher as electronic, scanned copies. The 24-page document, containing 277 environmental and property descriptive variables were manually transferred to electronic spreadsheets for organization. All non-numeric data that was included in the study were coded to numeric results and every hotel property was de-identified with a numeric code.

The researcher abided by an established protocol developed prior to the evaluation of the applications that called for an extra level of accuracy because of the manual nature of the information compilation (Creswell 2009). The researcher randomly selected 14 individual results on the spreadsheet for each property, which was five percent of the total number of questions, and confirmed the response accuracy with the corresponding FGLP application. If more than two results on an application were found to be incorrect, the entire document was rescored, which did not occur. Yet, the confirmation process contributed to greater validity because the "researcher checks for the accuracy of the findings by employing certain procedures" (Creswell 2009, p. 232) in the compilation of the secondary data.

5.7.1.2 Social Media

The specific social media sites were selected for inclusion in the study based on the findings discovered by Chan and Guillet (2011) in their investigation about social media marketing within the hotel industry in Hong Kong. While Chan and Guillet (2011) reviewed 23 social media sites, only the top five sites were "popularly used social media sites in the industry" (p. 353) depicted in table 3.8. Four of the top five sites exposed in Chan and Guillet's (2011) study were also used to discover a social media presence within the hospitality industry in O'Connor's (2010) study. In addition, Anderson (2012) also examined one of the five popular sites also included in Chan and Guillet's (2011) study to determine the direct fiscal impact customer ratings had on a property and concluded the importance of transforming the traditional Internet marketing methods to meet current market demands. Due to the expeditious rate of change within the online environment "companies must be prepared to

efficiently navigate through the ever changing landscape of social media tools" (DiStaso et al. 2011, p. 327), which led the researcher to adapt the social media sites to also include two additional websites: FourSquare, Pinterest.

The addition of FourSquare and Pinterest was first considered because of specific social media guidance offered by the American Hotel and Lodging Association, which provided the recommendation to hoteliers in the United States to "have an online presence" (AH&LA 2013c) on seven particular social media sites "to better serve your current guests and attract new guests" (AH&LA 2013c). Five of the sites had already been selected for inclusion in the current study from Chan and Guillet's (2011) adapted social media list, leaving FourSquare and Pinterest on the list from the country's only national association representing the hospitality industry (AH&LA 2013b). Instead of disregarding these two additional websites, more recent research confirmed their growing popularity (Hempel 2012; Barnes et al. 2013; Gilbert et al. 2013; Barnes and Jacobsen 2014; Hambrick and Kang 2014) and use within the tourism industry (Minazzi and Lagrosen 2013; Trihas et al. 2013). The addition of these two sites also confirmed the conclusion of DiStaso et al. (2011) of the "ever changing landscape of social media tools" and that "each day brings new forms of social media" (p. 327).

Therefore, the researcher selected to review the five social media sites deemed "popular" in Chan and Guillet's study (2011, p. 353) and further reviewed by O'Connor (2010) and Anderson (2012). Two more newly established sites were also included to incorporate an updated holistic view of the social media atmosphere that the hospitality industry operates within in the state of Florida. These seven sites were reviewed to determine the presence and potential eWOM marketing efforts of the 81 FGLP included in the sample set. Yet, instead of simply noting that a property utilized a particular site, which was the case in Chan and Guillet's (2011) study, the researcher recorded the metric data captured and displayed on each site, similar to Anderson (2012) and the study by Noulas and Mascolo (2013). The social media sites and the recorded variables included:

- Twitter
  - Presence
  - Number of Tweets
  - Twitter Followers
  - Twitter Following
- Facebook
  - Presence
  - Number of 'Talking About'
  - Number of Check-ins
  - Likes
- YouTube
  - Presence
  - Number of Videos
- Flicker
  - Presence
- TripAdvisor
  - Presence
  - Overall Rating
  - Number of Review
- Pinterest
  - Presence
- Four Square
  - Presence
  - Score
  - Total Visitors
  - Total Visits

The social media findings were accumulated using a pre-determined protocol established at the start of the study in order to increase the reliability of the evidence collected and to provide consistency in data collection. The protocol followed a similar process as Chan and Guillet (2011) where "each hotel company was manually searched on selected social media sites" (p. 352), which contributed to the study's reliability because the "approach is consistent across different researchers and different projects" (Creswell 2009, p. 232). The protocol consisted of:

- Search each social media site using the property name in quotation marks as it appeared on the FGLP application to locate the specific phrase;
- If no results appeared, quotation marks would be removed and one more search would occur; and
- If no results were found with the above-described searches, the assumption was made that the property was not represented on the SM site and was recorded as such.
- The same accuracy protocol that was established for the FGLP applications was also implemented for the social media data collection. Whereas, the researcher randomly selected two results, which was ten percent of the total number of variables for each property, and confirmed the response accuracy with the corresponding website. If either of the two results for each property were found to be incorrect, the entire property was reviewed and rescored

online, which did not occur. Yet, the confirmation process contributed to greater validity with the compilation of the secondary data.

The data were collected in September, 2014. The culmination of the social media data collection obtained 1,701 individual variables. Also, just as the protocol for the FGLP established, all non-numeric data that was included in the study were coded to numeric results.

5.7.1.3 Web-based Survey

Several survey methods were considered for the research study, including face-to-face questioning, telephone interviews, mailed paper-copies and web-based questionnaires (Creswell 2009). The implementation of a web-based survey as an instrument for gathering primary research was incorporated into the data collection because of the benefits associated with survey instrument (Klassen and Jacobs 2001; Creswell 2009). Prior research about the online tool indicated that web-based surveys tend to have improved accuracy, faster response time and lower costs associated with their implementation (Klassen and Jacobs 2001). In addition, the ability to require a response for each question before submission when compared to mail or face-to-face surveys is an added benefit. That said, web-based surveys do not allow for follow-up questions or the encouraged continuation of open-ended responses, which may provide unique and unanticipated explanations to posed questions. Although the limiting side of no follow-up questioning was considered, the researcher implemented the use of web-based surveys because of the many benefits.

The recipient of the web-based survey was selected based on two practical motives. The first was the name and contact information had been provided for both the general manager and the FGLP primary contact in each FGLP application, which would therefore allow the researcher to pair the primary survey results with the secondary results for each property. The second rationale for the selection of survey recipients was offered by JoAnn Shearer (2013b), the program coordinator for the FGLP, when she revealed that over the years of implementing the program her main source at each certified property was the individual listed as the primary contact in the program's official documentation. She explained:

> "These guys know everything and most of the managers just let them have control. So when I meet the managers, most of them know they are part of the state green program, but they don't really understand what it entails. So, your best bet is to deal with the primary contact" (Shearer 2013b).

The combination of these motives, presented the rationale for the inclusion of the FGLP primary contact as the recipient of the web-based survey, which was supported by Malhotra and Grover (1998), who recommended that the survey instrument should request data appropriate for the targeted sample. That said, the researcher recognized the importance of the insight the hotel manager held in the overall operation of the property, which led to this inclusion of a specific instruction in the survey's introduction:

> You may find it helpful to consult with a member of your hotel's management team for the survey if you are unsure of how to reply to specific questions.

An email database was developed from the 81 FGLP applications and incorporated into the "online survey tool" (Creswell 2009, p. 149) SurveyMonkey.com, which was the online tool selected in this case to gather the insight from the FGLP. The online tool required each survey recipient to possess the ability to both receive a personalized email invitation to enter the survey and the ongoing access to standard internet service to respond to the survey. The selected survey sample each possessed a professional email account, as listed on the FGLP application, which inferred the ability to access this account on a web-connected computer, which implied access to internet for the ability to respond to the study's web-based survey. Each survey respondent was offered a chance at an incentive valued at ten dollars for his or her participation (also addressed in section 5.8).

Creswell (2009) referred to such a sample design as a "single-stage sampling procedure" (p. 148) where the "researcher has access to names in the population and can sample the people directly" (p. 148). The research sample selection was narrowed down to a "random sample, which each individual in the population has an equal probability of being selected" (p. 148) and "with randomization, a representative sample from a population provides the ability to generalize to a population" (p. 148). In an effort to further confirm the narrowed sample was representative of the population, additional analysis was conducted on the responses to ensure non-

response bias did not impact the findings (as outlined in section 5.8 with results in section 6.3.1) the mean scores of specific survey variables were calculated both at the beginning and at the close of the survey to ensure responses held similar characteristics as followed by Armstrong and Overton (1977).

An electronic survey was assembled based on the literature of the domain and the economic data missing from the secondary research that had previously been requested in earlier FGLP forms. Since the main objective for the survey was to gather economic results, the researcher opted to keep the survey brief in an effort to increase the participation rate (Klassen and Jacobs 2001) and therefore only seven questions were included in the questionnaire. The first two questions appeared very similar about the benefits associated with the FGLP, but the Likert-based questions were included because of the potential findings each held independently and collectively. The first question:

> The Florida Green Lodging Program website states that your certified hotel receives all of the following benefits. Please rate the benefits.
>
> *The respondent selected from a rating scale of: 1 Very Important, 2, 3, 4 Moderately Important, 5, 6, 7 Not Important.*

The first question was included in the survey because it established which of the included responses were actually beneficial to each certified property. Although this seems counterintuitive, The FGLP had never tested or requested feedback from certified hotels about the attributes of the program that could be categorized as beneficial (Shearer 2013b). Therefore, it was presumptuous to review findings and consider each attribute as beneficial simply because the FGLP website claimed it to be beneficial, if properties did not hold the same view. The second question was:

> The Florida Green Lodging Program website states that your certified hotel receives all of the following benefits. Please rank them from 1 to 7, with 1 being the top benefit and 7 offering a lesser benefit.
>
> *The respondent selected from a rating scale of: 1 Very Important, 2, 3, 4 Moderately Important, 5, 6, 7 Not Important. Each numeric selection was only permitted to be used once.*

The follow-up question allowed each FGLP respondent to rank the benefits in the order of importance they felt their hotel received. This insight offered areas to which more or less attention could or should be paid. The findings also held the ability to

analyse what the certified properties valued more: environmental, economic or social benefits.

The web-based survey was then tested by like-properties to determine if confusion surfaced and/or if changes could benefit the potential results. The pilot stage of the survey was conducted during a one-week period from October 27-31, 2014 and included five hotels in the Tampa Bay area of Florida. These properties were not certified by the FGLP, but were all certified by the TripAdvisor GreenLeader program, which followed a similar certification process (TripAdvisor 2015). Ideally the pilot study would have included FGLP hotels, but with a study sample limited to a maximum of 81 properties, the researcher opted to test the survey on a like population (Dalkmann et al. 2008) to preserve the potential research sample of the study. The electronic surveys were offered to two general managers and three individuals within the facilities and engineering departments, which reflected the two largest, represented positions named as the primary contact on the FGLP application. The initial test of the survey confirmed the questions and wording of the questions were understood, but the design of the first two questions exposed some technical issues. The use of the online survey tool offered the ability to visually display the questions in a variety of ways without having to develop multiple surveys to test during the pilot stage, which generated beneficial adjustments to the survey with relative simplicity to the researcher. Correcting issues such as this is the rationale for conducting a pilot survey with a like population to ensure accurate findings in the study (Creswell 2009). Adjustments were made and each of the individuals in the pilot study endorsed the final seven questions included in the survey (appendix five).

The web-based survey was delivered to the 81 individuals on November 11, 2014 listed as primary contacts on the FGLP application. Each recipient was provided with a unique web link sent from the researcher's official university email account to participate in the study. The email introduced the researcher, briefly described the aim of the study, explained the voluntary and anonymised nature of their participation and included a personalised link to the survey (see appendix four). A recipient's election to both enter the survey and click the 'complete' button of the survey served as the acknowledgement of consent for each participants. Survey participates were offered

the opportunity to receive a summary of the study findings, the opportunity to participate in a future semi-structured interview and a chance to win an incentive in a drawing because of their participation. Reminder emails were sent to non-responsive participants on three occasions and the survey was closed on December 19, 2014. At the conclusion of the survey, the data was downloaded and transferred from the online, password-protected website to Statistical Package for the Social Sciences (SPSS) for analysis.

5.7.2 Data Analysis

The data collection amassed three distinct sets of statistics that were collated in two spreadsheets. The first document held 24,057 variables and represented 81 FGLP properties and the second held 884 variables and represented 52 FGLP properties. Each spreadsheet was reviewed for accuracy and missing data, but the individual components were each added to the document utilizing the accuracy protocol as established in data collection of the FGLP application and the social media assemblage, where the data received a second review to confirm accuracy. The third set of data, obtained from the web-based surveys, was downloaded directly from the online survey tool where the researcher confirmed there was no missing data from the required questions included in the survey.

SPSS version 22 was selected as the statistical package to analyze the collected data for the study. SPSS offered the researcher a variety of statistical procedures to provide descriptive overviews of the findings and to explore the potential of relationships that may exist between the variables. While all variables were reviewed for frequencies and descriptive analysis, a refined list of variables pre-determined during the planning stages based on the hypotheses (Creswell 2002) was further reviewed. The refined variables were used to investigate the aim and objective four of the study by determining if a relationship existed between them. Multiple regression analysis was used for investigating if a "combined relationship of multiple independent variables with a single dependent variable" (Creswell 2002, p. 376) produced a statistically significant relationship. Such a statistically significant relationship is revealed in an equation that offers numeric representation of the positive or negative nature of the relationship and the strength of the relationship (see sections 6.3.3.1—6.3.3.6). In an

effort to further refine the study's independent variables (the social media presence of each FGLP property), backwards regression analysis was implemented to further predict the dependent variable, which is similar to Shan and Taylor's 2014 study that sought to understand the relationship between a firm's environmental reporting and its fiscal outcome. Such a procedure was conducted for all of the study hypotheses outlined in section 5.3 and determined in chapter six.

5.7.2.1 Dependent Variables

The study utilized five dependent variables in the statistical calculations. The variables are items both sought and utilized in previous studies, which consist of RevPAR (Anderson 2012, Zhang et al. 2014), and the operational utilities of a hotel (Deng and Burnet 2002; Claver-Cortes et al. 2007; Gössling et al. 2012; Zhang et al. 2014). All of the dependent variables can be classified as a ratio measurement because each identified a specific value and each scale of measurement possesses an absolute zero, unlike interval scales that do not have a true zero within (Field 2013).

The dependent variables include:

- RevPAR
- Percentage Recycled, Reused and/or Composted Compared to Overall Waste
- Cost of All Water Per Guest Room
- Cost of All Waste Per Guest Room
- Cost of All Energy Per Guest Room

The first dependent variable is derived from primary research collected via the electronic survey and is calculated using the formula employed by Reid and Bojanic (2010) and STR Global, the company used by Cornell University Center for Hospitality Research studies (Smith 2009; Enz 2011; Anderson 2012; Blal and Sturman 2014) that tracks the market information of the hotel industry (STR Global 2015). Using the survey respondent's results for questions five and six, the researcher applied the following formula to obtain RevPAR:

Average Daily Rate **x** Occupancy Percentage = RevPAR

The remaining four dependent variables have elements extracted from the FGLP applications and were treated with a formula implemented to accommodate the wide range of the size of properties to better compare results and have a consistent measure across all utilities. As explained in section 6.2.1 and documented in academic journals (Deng and Burnett 2002; Claver-Cortes et al. 2007; Gössling et al. 2012), the study's calculations either determined the cost of the overall utility usage delineated per guest room or established the percentage of waste that was reused, recycled or composted compared to the waste sent to the landfill by each certified hotel. The calculated findings delineated per guest room are "an attempt to normalize energy use relative to a primary determinant" so that the properties "are comparable" (Sharp 1996, p. 4321), which makes the findings "more equitable" (Xuchao et al. 2010, p. 4521).

The normalization of data, employed in hospitality research within the United States (Zhang et al. 2014) in Singapore (Xuchao et al. 2010) and also used in environmental investigations of commercial buildings (Sharp 1996) provided context to the large numeric outcomes submitted in the FGLP applications and the ability to compare the outcomes of the waste practices implemented at each property.

The formula applied to obtain the percentage recycled, reused and/or composted offset by the overall waste was:

$$\frac{\text{Volume Reused, Recycled or Composted}}{\text{Volume Sent to the Landfill}} = \%\text{ of Overall Waste Reused, Recycled or Composted}$$

The formula to applied to establish the cost of the utilized utility differentiated per guest room was:

$$\frac{\text{Total Cost of All Waste Disposal}}{\text{Number of Guest Rooms}} = \text{Annual Cost of all Waste Disposal Per Guest Room}$$

The decision to compare each property's utility usage by cost for the three utility-based calculations versus the measurement provided for each function (i.e. gallons of water, cubic feet of waste, etc) was intentional. With these three dependent variables and the RevPAR variable based on the same unit of measure, the statistical findings produced four like b-coefficients. The observation of the unstandardized b-coefficient, represented with the capital letter B (Sekaran 2000), was calculated using the variable's original unit of measure (i.e. U.S. dollars), which demonstrated that one unit of measurement of the independent variable can predict the increase/decrease of the unit of measurement of the dependent variable (Field 2013). Therefore, basing these three dependent variables on the same unit of measurement (i.e. U.S. dollar) allowed for greater comparison across the hypotheses and provided the generalized results to demonstrate both environmental and economic performance, which related back to the study's aim and objectives to determine if the variables contribute to the competitive advantage of the FGLP properties. In addition, the findings could more easily be transferred and related to other locations and/or industries with only a one-time monetary conversion of data versus the breadth of weights and capacity measurements that are utilized.

5.7.2.2 Independent Variables

The independent variables employed in this study build upon the foundation established by Chan and Guillet (2011) and further developed by Anderson (2012) in their investigations of social media usage within the hospitality industry. Using the data collection procedure implemented in a previous study (Chan and Guillet 2011), the independent variables were manually obtained from each online website or were the sum of all of the websites outlined in section 5.7 The remaining variable was the only primary research inclusion among the independent variables, which was requested in the online survey and gathered the number of employees supporting a property's social media efforts.

The independent variables included in this study fall into two categories of measurement scales; ratio and nominal (Field 2013). The specific ratio data collected the exact value expressed on each website, accounting for a site's followers, likes, number of videos and even the number of reviews. Whereas, the nominal data

collected whether a hotel selected to participate on each social media website. This data was coded as ‘one’ denoting a property’s presence and/or participation on the site or coded as ‘zero’ for a lack of presence and/or participation. Limiting the nominal data to only two organizational categories further classified the findings as dichotomous. The independent variables consisted of:

- Number of Social Media Staff
- Twitter
  - Participation
  - Number of Tweets
  - Following
  - Followers
- Facebook
  - Participation
  - Likes
  - Talking About
  - Check-ins
- YouTube
  - Presence
  - Number of Videos
- FourSquare
  - Presence
  - Score
  - Total Visitors
  - Total Visits
- Pintrest

Presence
- Flickr
  - Presence
- TripAdvisor
  - Presence
  - Rating
  - Number of Reviews
- Number of Social Media Site

5.8 Validity and Reliability

Creswell (2009) found that doubts that arise about validity and reliability could have an impact of the outcome of a study and therefore should be addressed in the onset of research and considered throughout. Concerns should be acknowledged and research design should take efforts to remove or reduce the concerns, and if concerns are still present in a study, they should always be demarcated.

Validity within a mixed methods research design entails that the "researcher checks for the accuracy of the findings by employing certain procedures" (Creswell 2009, p. 232). Threats are presented as external and internal validity. Threats to internal validity typically occur in studies that conduct longitudinal experimental reach (Babbie 2007), and while this study does not comply with a longitudinal description, the internal validity was still considered. Concerns about the internal validity transpire over time with the maturation and mortality of participants, the comparison of participant treatment throughout the study and ensuring the selection process of the participants is representative (Creswell 2002). Since the current study did not collect data over a long period of time and instead utilized data from one time period, concerns about dealing with participants over the passage of time was not an issue that may present themselves in conducting multiple tests or attempting to maintain control variables of participants.

Internal validity was considered during the selection of the research sample, but since the researcher was able to first review all of the FGLP application that were submitted in January 2014 and then received a 63 percent web-based survey participation rate, concerns were lessened because of the procedures put in place and data collected in a given timeframe. Yet, additional analysis was conducted to determine if non-response bias was present in the survey submissions that were not returned. The investigation into potential non-response bias was conducted in two waves as explained by Armstrong and Overton (1977) and used by Vorhies and Morgan (2005). This evaluation method reviewed the early responses and late responses to the web-based survey and found that no significant differences between the two sets existed. Such a result further validated the submitted findings and reduced potential threats for non-

response bias that exist in data collection via surveys. Additional tactics were also employed to ensure "accuracy of the findings" (Creswell 2009, p. 232), which included the five percent review of all secondary data (see section 5.7.1) and a thorough review of all the data occurred during the transfer between the software programs of Excel and SPSS.

One consideration to the potential impact on the study's internal validity included the offering of a chance to receive an incentive for participation in the web-based survey. Since the survey sample consisted of the primary contact for the FGLP at each property, it should be noted that these individuals span a range of seven different job categories (appendix two) that most likely maintain different income levels. Therefore, the incentive, with a value of ten dollars, had the potential to incrementally influence participation in the survey considering the relative value of the incentive compared to the respondent's income level. The researcher also considered a monetary donation to a charitable organization in the respondent's name, but the pilot study revealed a lack of interest in this offering, but still expressed an interest in the personal incentive. That said, in an effort to garner a greater response rate to the web-based survey, the researcher implemented the use of the incentive valued at ten dollars fully understanding the potential threat to the internal validity. The findings were later assessed to ensure that the survey sample was a representative sample of the 81 originally assessed properties.

The generalizability of the study's design and the ability to transfer the design to other research populations is the core concern of external validity (Creswell 2009). The study considered all voluntary, state eco-certification programs for the hospitality industry in the United States and further investigated three states (section 5.6) to determine a sample set that provided the greatest insight paired with an economic environment that enveloped the tourism. The FGLP population was selected for use throughout the study instead of comparing the results to other eco-certification programs. Creswell and Plano Clark (2007) and Woolley (2009) justified that using the same population, even if narrowed to smaller subsamples, permitted stronger data comparison and improved validity. Such a research atmosphere provided a sample to examine occurrences of 81 properties with access to data not collected in other states

that can be generalized to other tourist destinations, be it in the United States or other well-visited destinations. The findings will best transfer to regions that attract many tourists, as the state of Florida attracted 93.7 million visitors in 2013 (Visit Florida 2015). Yet the findings still hold the possibility to provide insight to lesser-visited regions. In addition, the study expanded the diversity of job responsibilities that provided responses to the sustainable efforts within the hospitality industry, which broadens the scope of the descriptive findings.

Reliability within the study "indicates that a particular approach is consistent across different researchers and different projects" (Creswell 2009, p. 232). Since the current study sought to extend previous research about environmental performance (Deng and Burnet 2002; Claver-Cortes et al. 2007; Gössling et al. 2012; Zhang et al. 2014), economic results (Anderson 2012; Zhang et al. 2014) and social media presence (Chan and Guillet 2011; Anderson 2012) that contributes to the competitive advantage of eco-certified hotels, the study used the foundation of previous research to initiate the reliability. The reliability was further fortified via statistical assessments in the pilot study and in the regression analysis. The use of multiple variables contributed to "average out uniqueness of individual items" (Malhotra and Grover, 1998, p. 412) and "have reliability" (Malhotra and Grover, 1998, p. 412) featured in the investigation.

5.9 Complications in Data Collection

5.9.1 Semi-Structured Interviews

At the start of the study, there was a fourth category of data that was to be included in the overall investigation. This portion of primary research would have included semi-structured interviews that were intended to enhance the quantitative findings with narrative explanations. A request to participate in a semi-structured interview was included in the web-based survey. While the survey achieved a 63 percent response rate, only five respondents or 9.6 percent, acknowledged their willingness to participate in future interviews. Despite several attempts, none of these interviews were scheduled (section 6.4.2), but quantitative findings were still assessed (section 6.4).

The intended plan was to conduct the initial interview with the rationale to collect data, but to also refine the line of questioning for the next four interviews. The researcher did not want to reduce the interview sample, but squandering one of the five interviews as a pilot study was not a viable option either. The compromise was to include the interview findings and benefit from refinement for the follow-up semi-structured interviews. The initial interview would have also allowed the researcher to discover the length of time required to complete the discussion; so realistic expectations could be shared with other participants. The researcher did consider a similar course of action as the web-based pilot survey where TripAdvisor GreenLeader certified properties (TripAdvisor 2015) were used as a pilot study. But, this option was disregarded as the findings were geared specifically for the FGLP and sought specific responses related to the FGLP. In the end, the addition or exclusion of these semi-structured interviews did not impact the research methodology or the philosophical foundation of the study, as the focus of the findings remained on the statistical outcomes of the regression models established from the hypotheses. The intended protocol would have gathered consent forms from all interview participants. The line of questioning for these semi-structured interviews is located in appendix ten.

5.9.2 Florida Green Lodging Program

The FGLP has been beset by with funding issues and inconsistent certification requirements since its inception in 2004, a fact which only became evident to the researcher after nearly a year of investigation. The researcher requested the 689 FGLP annual reports for 2011 (FGLP 2013), and after six months of waiting with little explanation, a spreadsheet containing the application contents for 2011 was delivered. The data, delivered via email on February 24, 2012, also requested a telephone conversation to explain why the 2011 data only contained data from 189 FGLP properties. It was explained, “the program is undergoing a change, so we didn’t request reports for 2011. The 2011 records are from the hotels that just sent them in without us asking” (Shearer 2013b). Therefore, the 2010 data was requested because it was the “most complete and up-to-date information” (Shearer 2013b). After another delay, the 2010 data were delivered via email on May 14, 2013. The spreadsheet for

2010 contained data from 374 hotels, still shy of the 689 posted on the website (FGLP 2013). Of these reports, only 238 were complete for 2010.

Due to a shift in the study's approach (section 5.10), the researcher requested updated data from the FGLP. Once again, a delay in the delivery of the data occurred and exposed an even greater deviation from the number of available FGLP reports and the number disclosed on the FGLP website (FGLP 2014b). The newly revamped FGLP released a new comprehensive application that would now be submitted every three years, instead of limited annual reports. Properties are still subject to FGLP inspections but now have the ability to achieve a ranking for their sustainable achievements through the new comprehensive reporting system to demonstrate its increasing commitment (Shearer 2013b). FGLP properties were told about the program change in 2011, which led to a decrease in the submission of 2011 annual environmental performance reports, and the program did not collect reports again until early 2014. Instead, the two-person staff focused their efforts on preparing and educating properties for the new reporting scheme. Certified properties were required to submit the new application in January 2014 to maintain the eco-certification, and the FGLP said it "would have the reports available for review in March 2014" (Shearer 2013b). Instead, after 12 unreturned telephone calls and five unanswered emails from February 2014 through June 2014 from the researcher to the FGLP office, the researcher evoked Florida statute 119 (Florida Legislature 2015), which requires the release of all public documents, on June 9, 2014. The law-backed request was met on August 11, 2014 when a director for the Florida Department of Environmental Protection (Ira 2014a) provided access to 98 electronically scanned FGLP applications, once again shy of the now 711 certified properties posted on the website (FGLP 2014b). Ira (2014b) explained:

> "I am just taking over the oversight of the lodging program and I am getting a new staff. We are trying to get a handle on how things were done in the past and how they will be done in the future. But the last thing I want to do is penalize certified hotels by taking them off our list without knowing if we have not fully explained the scenario to them and since it's been so many years of troubles, we need to figure out who we need to talk with, with staffing changes and all" (Ira 2014b).

5.10 Selection of Research Methods

Many sources of information and modes of analysis were initially considered before embarking on the outlined research path. The original research journey adopted a mixed methods foundation and utilized an earlier sample set of FGLP hotels submitted in 2010. The original plan reviewed the increased number of 374 FGLP properties, which used a different report with a reduced amount of data. Although many of the reports were missing information, the study was left with 238 properties to review. The researcher then developed the formula (figure 5.3) using the data included in the FGLP annual environmental performance report to establish the most and least sustainable properties throughout the state of Florida. The numeric ranking was not developed as a means to determine a property's sustainability effectiveness. Instead, the score would have allowed the researcher to focus on the upper and lower quartile of the ranked hotel properties, which theoretically were the most and least sustainable eco-certified hotels.

$$\frac{E + W + (T - R)}{A * O}$$

E=Energy Cost in U.S. dollars
W=Water Cost in U.S. dollars
T=Waste Volume in cubic feet
R=Recycled, Composted or Reused Waste in cubic feet
A=Total Property Area in square feet
O=Average 12 month Occupancy as a percentage

Figure 5.3 Initially Proposed Sampling Formula

The adjusted sample set of the top and bottom quartiles included 119 properties. The researcher planned to use regression analysis to compare the social media variables still used in the current study to the sustainability score determined by the formula in figure 5.3. Following the analysis of the findings, four to six hotels would be identified to provide qualitative insight about the findings. The researcher considered surveys, focus groups and face-to-face interviews for this qualitative data collection.

The original research agenda was discarded in favour of the current protocol. It should be noted that the current research protocol adopted similar methods and sources of data, but eliminated areas of concern that were present in the original agenda. The areas of concern included:

- The proposed sampling formula was the topic of numerous valuable discussions and the catalyst for the study's focus on the quantitative findings in the current mixed methods study. Discussions debated the validity and reliability of the formula's contents and the practicality of being able to identify the outcome as the most and least sustainable FGLP properties.
- Limiting the sample set was also of concern because this was the first time that an independent researcher had reviewed the data from the FGLP annual environmental performance report. Since the inception of the FGLP in 2004, the reports had simply been collected and reviewed by FDEP employees and never shared for publication. That said, the researcher felt an obligation to provide a robust foundation of data for future research and the opportunity for greater understanding.
- A concern developed about the two data sets being from different time periods. The FGLP data was submitted in January 2010 and the social media data was gathered in April 2014.

The adjustments to the research methods and data sources in this investigation have contributed to a more robust study and in turn to stronger findings in the current research protocol. That said, the researcher was disappointed in the reduction of the number of certified properties to analyze in the current study and that the updated FGLP application did not request annual fiscal outcomes. Yet, these hindrances were overcome with a new FGLP application that provided greater insight via a 24-page document and an electronic survey administered by the researcher to collect fiscal outcomes.

5.11 Assumptions, Limitations and Delimitations

The researcher took steps to develop a study that critically assessed a real-life situation, to produce findings that made both an academic and a policy-shaping contribution. It is important to review these restrictions to better understand the research foundation, findings and contributions.

5.11.1 Foundation of Sustainable Development

Not all researchers (Middleton 1998) recognize the triple bottom line explanation depicted in figure 2.1 that underpins sustainable development, but this thesis and its findings were compiled under the assumption and existence of the triple bottom line explanation. While other researchers such as Middleton (1998) acknowledged two dimensions of sustainability, "the physical environment" (p. 7) and "the social and cultural environment" (p. 7), the researcher opted to also include the economic element, included in the triple bottom line, to ensure the findings were better suited for the business/management community, both academic and industry. This does not conclude that the academic and industry communities would not appreciate the environmental and social benefits, but this thesis assumes their attention also remains keenly focused on the fiscal wellbeing of a firm.

While the researcher recognized the importance of the social element of the triple bottom line, this measurement is not included in the study because it was not requested and/or collected in the three state specific eco-certifications programs for the hospitality industry (table 5.4). Attempting to request this data from the participating hotels at a later date might limit the number of properties in the study. In addition, Stead and Stead (1996) recognized the challenge of calculating, collecting and comparing social impacts of the triple bottom line because of the diversity of activities that is considered in this category.

5.11.2 Tourism Accommodations, Travellers and the Tourism Industry

While this thesis does not include quantitative and/or qualitative findings that contribute to the refinement of the travellers that visit FGLP hotel properties, it will utilize the proper units of measurement, definitions and the shared language offered by the UNWTO (1994) and outlined in section 2.4.1. The thesis findings are only inclusive of collective tourism accommodation establishments, which is due to the

fact that the FGLP does not offer certification to private tourism accommodation establishments (individual homes) or collect data pertaining to individual travellers. Also, despite the fact of the ongoing debate on whether tourism can or should be viewed as an industry (Middleton 1998), this thesis has use the 'tourism industry' terminology.

5.11.3 The Use of Hotel and Property

The words 'hotel' and 'property' are used interchangeably throughout this document and both represent an individual lodging site. The word 'hotel' is not meant to represent a hotel company with multiple sites. The word 'property' is not meant to represent a portion of land and/or possession of an item. Although the FGLP demarcate the type of lodging facility into four subgroups, one categorized as "hotel," this study does not impose the FGLP explanation throughout the study. Instead the sub-groups are only identified and reviewed in the descriptive findings in chapter six.

5.11.4 Geographic and Programme Specific Limitations

It must be recognized that the study was limited to one state in the United States of America and one government-operated, voluntary eco-certification programme within that region, which placed both geographic and programme specific limitations on the findings. While the researcher took strides to generalize the study protocol, the findings may have variations if conducted in a different environment with a different eco-certification programme.

5.11.5 Quantifying WOM Marketing

Studying WOM marketing presents major challenges in quantifying the volume of individuals that encounter interpersonal communications (Trusov et al. 2009), which is why the researcher has chosen to limit the research field to social media applications. Specifically, the study focused on investigating the channel variety and the volume (depicted in tables 3.4 and 3.5) of social media participation of each eco-certified hotels. While WOM marketing is not limited to these applications, the Internet measures "should be a good proxy for overall WOM" (Trusov et al. 2009, p. 95).

5.11.6 Selection of Social Media Sites

As explained in section 5.7.1. the researcher based the study's social media selection criteria on the Chan and Guillet (2011) investigation about social media marketing in the hotel industry in Hong Kong. However, the current study did modify the social media sites evaluated with the removal of three web locations that were geared toward the original audience in Hong Kong. In addition to the geographic exclusions, 14 more were excluded after no hotel properties were found to use the specific social media sites in the review of the first half of the FGLP sample set. The final exclusion occurred with the Zagat website because the property-specific site could not be located utilizing the same search criteria used with the other social media sites. The Zagat site is organized by restaurant name, not the hotel name listed in the FGLP annual environmental performance report.

The exclusion of the previously explained social media sites, coincidentally left the websites that Chan and Guillet (2011) deemed the most popular. The social media sites that were excluded from the current study were:

Windows Live Spaces	Bebo
Self-Initiated Blogs	Friends Reunited
Skyrock	Orkut2
Blogger	Second Life
Live Journal	Hi5
MySpace	Digg
LinkedIn	Delicious
Friendster	Self-Initiated Video
Xing	Zagat

The researcher also included of the websites of Pinterest and FourSquare as explained in section 5.7.1.

5.11.7 Selection of Measurement on Social Media Sites

Using the modified social media sites established in section 5.7.1 with the rationale of the modification explained in section 5.11.6, the researcher elected to use the quantitative measurement adopted by each website to compare the FGLP hotels based on the same criteria. This matches the social media quantitative measurement adopted by (Gruhl et al. 2005; Boyd and Ellison 2007; Kwak at al. 2010; Anderson 2012).

5.11.8 Selection of Resource-Based Theory as the Philosophical Foundation

A comprehensive literature review of both sustainable tourism and marketing were first conducted to understand the two diverse research environments prior to the review of the theories used to unite the topics. The foundation of understanding permitted the researcher to evaluate the selection of the study's theoretical underpinning based on her investigation and that of prior research (Ketchen and Hult 2007; Connelly et al 2011). The theories considered in this study had previously been established as the theoretical lens to evaluate the convergence of both marketing and sustainability within organizational research and therefore any of the theories outlined in sections 4.2.1-4.2.9 would have been theoretically fitting, but the researcher selected RBT (see section 4.3) because it best supported the understanding needed to accomplish the aim and objectives outlined in this study (section 5.2).

Upon selection of RBT, the researcher enhanced the literature review (chapters 2 and 3) to ensure the literature captured the importance of using a firm's internal resources to achieve a competitive advantage, the goal of RBT. The refinement of the literature equipped the researcher with the specific knowledge to develop the study's methodology and the selected methods employed in the investigation. RBT became the belief, the attitude and the standard that guided the researcher throughout the data collection process and the analysis of the findings. RBT categorized each of the study's variables as a resource to individually determine if the specific operating result and/or eWOM marketing effort contributed to a correlated result. Next under RBT, the correlated results were evaluated to determine if they produced a competitive advantage using a monetary unit.

If the researcher had selected a different theoretical underpinning for this study, the researcher feels the investigation would have been organized differently and may have achieved different results that would have corresponded with the guiding principles of another theory.

5.12 Ethical Considerations

Ethical principles were considered throughout the research study to ensure information collected would not only be fair and truthful, but would ultimately benefit the involved parties, subject-matter experts and academic researchers (Creswell 2009). While no significant ethical issues were expected in the study, as the majority of the research variables were available to the public, this was the first occasion that the results from the FGLP annual environmental performance report was being shared publicly. Therefore, the names of the hotels were de-identified, property locations were removed, names of hotel employees and their corresponding email addresses were taken out and the electronic surveys results were anonymised to ensure focus remained on the overall correlated findings and not on individual properties in all published documents.

The research study conformed to the ethical guidelines established by Queen Margaret University and received ethical approval before the researcher conducted any portion of the study.

5.13 Conclusion

The mixed methods study aimed to continue the investigation into the convergence of marketing and sustainability research that was highlighted in the Journal of the Academy of Marketing Science (2011: 39). The pragmatic underpinning permitted the collection, analysis and interpretation of the numeric-based results combined with supportive qualitative findings. Six hypotheses were developed to address the study's aim and objectives to determine if relationships exist among an eco-certified hotel's environmental performance, economic results and social media presence. The next chapter examines the findings that were outlined in the research design in this chapter.

Chapter Six

Findings and Analysis

6.1 Introduction

Utilizing the philosophical framework and methods outlined in the methodology chapter, paired with the literature review in chapters two, three and four, the study embarked on the examination of the data collected from the FGLP properties. The collected findings, which consisted of both primary and secondary data, were first subjected to descriptive and frequency distribution analysis followed by the use of multiple regression techniques to explore the quantitative relationships that potentially exist between the three categories named in the study's aim. The analysis sought to determine if relationships existed among an eco-certified hotel's environmental performance, economic results and social media presence. The three categories are expanded upon in the study's six hypotheses, which were developed based on the literature outlined in the preceding chapters. The quantitative outcomes of the hypotheses provide the foundational understanding about how and if the variables contribute to the competitive advantage of eco-certified hotels through the scope of RBT. The qualitative findings add to the greater understanding of study's environment.

This chapter initially offers a descriptive analysis of two sets of data, which established an understanding about the facilities, utilities, staff support and social media participation of the 81 FGLP certified hotels. The third set of data, provided in a web-based survey, contributed financial insight as well as opinions to better understand the contextual environment of the FGLP.

6.2 Descriptive Overview

In total, 25,023 variables were compiled, which consisted of 1,701 social media variables, 22,437 variables taken from the FGLP application from the 81 eco-certified hotel and 884 responses from 52 properties that participated in the electronic survey. While all of the variables provide a strong foundation of understanding and offer insight to information that had not been exposed, 1,434 variables were used to determine the findings of the study's hypotheses (section 5.3).

While a large segment of the data collected were not utilized in the statistical analysis of the study, the findings provided a strong foundation to increase the breadth and understanding about consumption habits and behaviours of eco-certificated hotels. The data were utilized to realize the aim and objectives of the study, but the data also holds the possibility to provide guidance for future investigations.

6.2.1 FGLP Application

81 eco-certified properties within the FGLP comprise the research sample investigated in this study. The sample was generated from 98 FGLP applications submitted to FDEP officials in January 2014 (appendix two). The majority of FGLP properties (87.2%) categorized themselves as a hotel or motel that have on-site conference facilities and at least one on-property restaurant (table 6.1). These properties remain in contact with the FGLP via a designated 'primary contact' that are represented by eight job-specific categories (appendix two) with 77.8 percent deriving from either property management or facilities/engineering. The lack of job-specific diversity among the FGLP primary contacts is notable, considering the FGLP placed no limitations or recommendations on the position.

Table 6.1 Property Overview of FGLP Facilities

	Minimum	Median	Mean	Maximum
Total Building Square Footage (feet)	4,340	175,188	376,418	3,280,000
Number of Guest Rooms	9	227	347	1,616
Total Guest Room Square Footage (feet)	3,600	98,500	191,016	1,521,458
Total Conference Square Footage (feet)	0	3,810	30,990	560,000

The FGLP application (appendix one) collected annual utilities data comprised of water and energy usage, along with waste disposal, which is segmented into waste sent to the landfill and waste being reused, recycled, or composted. These environmental performance measures were each requested in two categories: the total cost of the utility and the volume used or discarded, which contributed to the wide disparity of results considering the range of sizes among the properties. Therefore, in addition to calculating the overall measures of central tendency and measure of

dispersion, the researcher also calculated the measures of central tendency and measure of dispersion based on the total number of rooms at each property to better compare the results. This approach is similar to how RevPAR is calculated and was used in previous studies (Deng and Burnett 2002; Claver-Cortes et al. 2007; Gössling et al. 2012. The cost of each utility was used as a comparison factor because it was the same unit of measurement for every category, instead of introducing a new measurement for each of the facilities utilities.

An overview of the facilities certified by the FGLP and included in the study is provided in appendix two. The remaining sections of 6.2.1 are organized into the "five areas of sustainable operations" (FGLP 2012a, p. 2) designated on the FGLP certification application. The areas include:

- Communication and Education (Guests, Employees, Public)
- Waste Reduction, Reuse, and Recycling
- Water Conservation
- Energy Efficiency
- Indoor Air Quality

6.2.1.1 Communication and Education

The FGLP website states, "two of the most important parts of any environmental plan are the communication and education components" (FGLP 2014c). Yet, a conversation with a FGLP official revealed this area of the program "was the weakest" (Shearer 2013b) where they had "pulled ideas from other green initiatives" (Shearer 2013b) but did "not really provide much direction" (Shearer 2013b) or tools for FGLP hotels to follow. That said, the FGLP application did request 36 responses related to communication and education (appendix two), which although not categorically organized into three sections, addressed three distinct groups: guests, staff and members of the community.

It should be noted that while the FGLP application does include the word 'advertising' and 'web site,' these words are only included once in the 24 page document. The mention of these words is in reference to the 51.9 percent of properties that include its environmental policies in either its advertising and/or website. The application does not include the word 'marketing' or make mention of the use of the eco-label in its application. This could be considered a potential oversight considering

the FGLP website claims it offers marketing assistance (FGLP 2014a) and such factors are one of the benefits an eco-certification possesses as a "meaningful marketing tool" (Gross et al. 2014, p. 166).

In the development of the FGLP application, a few of the questions in the communications and education section reveal similarities to other questions. These questions could have been included as a reliability check within the responses because "a question is important or is particularly sensitive or controversial, the degree of truthfulness or thoughtfulness of the responses may be in doubt" (Rea and Parker 2012, p. 45). Therefore, "by asking virtually the same question in a somewhat different manner and at a different place" (Rea and Parker 2012, p. 45) may reveal a respondent's consistency. If this is the case, the similar questions and corresponding results are:

9. Provide tours of your facility to guests and the public that highlight environmental improvement projects.	39.5%
11. Host a community or guest event highlighting your facility's green practices.	27.2%

14B. Conduct regular staff training for handling of hazardous sensitive materials	93.8%
14D. Conduct regular staff training for proper disposal and handling procedures in chemical storage areas.	86.4%

14C. Conduct regular staff training for best environmental management practices.	85.2%
14E. Conduct regular staff training for importance and rationale for environmental practice implementation including: economic, environmental and social considerations.	72.8%

18. Have a formal written comprehensive environmental policy.	51.9%
19. Develop a written strategic environmental action plan.	25.9%

While the previous questions exhibit similarities, the words may not be interpreted the same for each respondent. For example, the words, 'tour' and 'event' (questions 9 and 11) and 'policy' and 'plan' (question 18 and 19) could be interpreted as similar or

with different meanings, but without additional definitional clarity the results remain uncertain. Therefore, the four question parings either reveal inconsistencies with the responses or demonstrate potential ambiguity with the questions (Rea and Parker 2012). The greatest difference was revealed between questions 18 and 19. The 26 percent difference might imply that FGLP properties do not include specific "actions" (FGLP 2012a) in its environmental policy or it could expose confusion and/or inconsistency with the responses. No matter the cause of the problem, a revision should be considered for future versions of the document to improve the quality of the data collected. Updated versions could include definitions of words to ensure that respondents better understand the questions. In the case of questions 18 and 19, definitions could be identified for the phrases "environmental policy" and "environmental action plan" (FGLP 2012a).

6.2.1.2 Waste Reduction, Reuse, and Recycling

The FGLP estimates that more than 50 percent of visitors to Florida "are hotel guests during some portion of their stay" (FGLP 2014c) and the "waste generated by these guests constitutes a large portion of the state's commercial waste stream" (FGLP 2014c). The likely environmental impact provides the rationale behind the collection of three descriptions of the solid waste that were accumulated annually at each certified hotel. The first measurement is the volume of solid waste sent to the landfill in cubic feet, the second is the volume of solid waste being reused, recycled or composted in cubic feet and the final request collected the cost of all waste removal from the property. The annual results for all certified properties are included in table 6.2 and appendix two.

Table 6.2 Solid Waste Annual Results of FGLP Properties

	Minimum	Median	Mean	Maximum
Volume of Waste Sent to the Landfill (cubic feet)	414	34,000	314,558	4,124,000
Volume of Waste Being Reused, Recycled or Composted (cubic feet)	0	12,000	34,405	333,560
Percentage of Waste Being Reused, Recycled or Composted Offset by the Waste Sent to the Landfill (%)	0%	32.02%	44.81%	200%
Total Cost of All Waste Disposal ($)	$984.00	$19,241.00	$34,790.16	$263,000.00
Total Cost of All Waste Per Guest Room ($)	$6.35	$84.93	$116.18	$402.30

Beyond the data provided in the FGLP application, additional analysis was conducted to better understand the context of the large numeric outcomes and to compare the outcomes of the waste practices implemented at each property. One calculation established the percentage of waste that was reused, recycled or composted offset by the waste sent to the landfill by each certified hotel with the this formula:

$$\frac{\text{Volume Reused, Recycled or Composted}}{\text{Volume Sent to the Landfill}} = \%\text{ of Waste Reused, Recycled or Composted Offset by the Landfill Waste}$$

The results of the formula seeking each property's percentage of overall waste reused, recycled or composted, revealed that the majority of certified properties offset their property's waste anywhere from one to 50 percent of the property's total waste. Yet not to be overlooked, 16 percent of FGLP hotels have implemented solid waste removal procedures that have completely offset the amount of debris that is sent to the landfill with the amount the property reuses, recycles or composts (appendix two) by at least 100 percent. Some properties even exceed 100 percent by recycling, composting and/or reusing more waste then the property disposes of in the landfill.

The next calculation determined the cost of the overall solid waste disposal delineated per guest room. As documented in academic journals (Deng and Burnett 2002; Claver-Cortes et al. 2007; Gössling et al. 2012), this strategy was implemented to accommodate the wide range of the size of properties to better compare results and to have a consistent measure across all utilities. The formula to calculate the cost of waste differentiated per guest room was:

$$\frac{\text{Total Cost of All Waste Disposal}}{\text{Number of Guest Rooms}} = \text{Annual Cost of all Waste Disposal Per Guest Room}$$

An assessment of the "Florida Green Lodging Certification Program" (Meeroff and Scarlatos 2006, p. 6) reviewed a guide for the lodging industry produced by the New Hampshire Department of Environmental Services, which had an equivalent state government program at the time. The New Hampshire document (NHDES 2001) estimated that its 600 lodging facilities produce a half a pound to 28 pounds per guest room, per day, with an average of 14 pounds per day. Using the same equation the FGLP facilities produced less than a quarter of a pound to 15 pounds per guest room, per day, with an average of 2.01 pounds per guest room, per day. This shift in numbers indicates that FGLP properties operate more efficiently than New Hampshire properties, that waste management procedures have progressed in the decade since the New Hampshire assessment, or that the larger research sample produced a wider span of results. Unfortunately, a similar evaluation could not be located to fully assess the differences between the two state findings.

The widespread implementation of environment-friendly waste disposal is evident in the individual responses to the first question of the waste reduction section of the FGLP application. As the first question of the waste reduction section of the FGLP application indicated (appendix two), properties confirmed the commitment to recycling in thirteen categories with office paper and printer ink cartridges reporting the highest level of execution. The recycling commitment continued in the placement of public bins for guests to use throughout the property in which 84 percent had receptacles for aluminium cans and newspapers, 81 percent had receptacles for plastic

bottles, 85 percent had receptacles for office paper and 79 percent had receptacles for magazines. The category of recycling batteries achieved a problematic adoption rate of only 69.1 percent, which is incredibly low considering two Florida statutes, 403.7192(3) and 403.708(13)(a), which prohibit the landfill disposal of both nickel-cadmium and lead-acid batteries. The 69.1 percent battery recycling adoption rate indicated that either 30.9 percent were not complying with state regulations, the response was answered incorrectly and/or these properties do not utilize any form of batteries. Despite the response, this question raised concerns and should be addressed by program officials.

While recycling efforts proved to be widely accepted at properties according to the individual actions, the remaining two waste reduction techniques of composting and reusing fall behind the recycling efforts (appendix two). In fact, only four hotels, which account for less than five percent of the sample, revealed that they incorporated composting food waste into its facility's waste disposal plan. Whereas incorporating reusable goods instead of disposable items fared better, with nearly 10 percent using refillable shampoo dispensers, 64 percent using refillable soap dispensers, 69 percent making use of cloth napkins and 78 percent offering glass drinking glasses.

6.2.1.3 Water Conservation

"In Florida, the supply of fresh water is a precious commodity and one of the State's most complicated environmental challenges" (Meeroff and Scarlatos 2006, p. 9). With Florida hotels consuming nearly 63 million gallons of water per day, working out to 154 gallons per day, per room (Meeroff and Scarlatos 2006), the probable environmental impact drove the FGLP to request two measurements of water consumption from certified hotels. The first measurement was the volume of water used for all operations, including irrigation and recreational activities in gallons. The second measure was the total cost of the water consumed annually at each FGLP property (appendix two).

While FGLP hotels were given the opportunity to specify the property's energy usage by the source of energy and the opportunity to demarcate its solid waste as either sent to the landfill or reused, recycled, or composted, the same consideration was not

offered on the FGLP application pertaining to water consumption. Instead, the FGLP application requests the total number of gallons used annually "for all operations, including irrigation and pool" (FGLP 2012a, p. 4). This query does not allow properties to distinguish between potable or reclaimed water provided via local utilities, water retrieved via underground wells, or water collected on-property via rain barrels and/or water retention ponds. In addition, the raw water consumption data is not paired with property descriptive information to provide context to the volume of water used, which could cause disparity with the addition of property features such a swimming pools, golf courses and on-site laundry facilities (Gössling et al. 2012). A possible explanation for the lack of requested description on the FGLP application "is because the tourism industry is not likely to make water use a key priority by itself, given the low cost of water in comparison to other operational costs" (Gössling et al. 2012, p. 13). Despite the non-aggregated data collected for water consumption, the annual results for all certified properties are included in table 6.3 and in appendix two.

Table 6.3 Water Annual Results of FGLP Properties

	Minimum	Median	Mean	Maximum
Volume of Water Used for all Operations, Including Irrigation and Recreational Activities (gallons)	14,468	4,250,000	19,156,664	303,763,518
Total Cost of All Water Used ($)	$1,546.00	$56,442.00	$128,561.95	$664,812.00
Total Cost of All Water Used Per Guest Room($)	$26.10	$290.12	$417.22	$1,676.11

Beyond the collection of numeric details pertaining to each individual FGLP property, the application revealed that 90.1 percent of hotels "use a preventative maintenance schedule to find and repair leaky faucets, toilets and pipes" (FGLP 2012a, p. 11), 79 percent track water usage and 67.9 percent "conduct regular water pressure monitoring" (FGLP 2012a, p. 11). The application also requested insight pertaining to the water conservation efforts delineated into six sections: public washrooms, guest rooms, kitchen, laundry, ice machines, and grounds/landscaping.

6.2.1.4 Energy Efficiency

"Lodging facilities have extensive opportunities to reduce energy use and the associated costs through choosing efficient equipment, limiting the amount of energy used at any one time, making routine energy saving choices and keeping equipment in optimum condition" (FGLP 2012a, p. 15), which provided the rationale for the collection of the costs and consumption breakdown of the energy used at each FGLP hotel. The annual results for all certified properties are included in table 6.4 and in appendix two.

Table 6.4 Energy Annual Results of FGLP Properties

	Minimum	Median	Mean	Maximum
Electricity Use (kilowatt hours)	2,177	258,000	517,070.56	3,484,345
Natural Gas (cubic feet)	0	28,735	75,525.59	664,812
Oil (gallons)	0	0	89.94	5,230
LPG (gallons)	0	0	4,305.64	202,114
Total Cost of All Energy Used ($)	$5,135.00	$314,119.00	$588,270.49	$4,021,020.00
Total Cost of All Energy Used Per Guest Room ($)	$110.94	$1,211.83	$1,577.28	$5,825.71

The FGLP application allowed hoteliers to designate the type of energy that was utilized at the property organized in six categories (appendix two). Despite the selection of six energy sources, most properties used two of the energy options. Every property used electricity and nearly 88 percent used natural gas, but few hotels ventured into other energy options. In fact, there were no properties that used more than three sources of energy.

A large portion of the energy efficiency section of the FGLP application focused on the implementation and use of Energy Star branded products, which assert that it "helps businesses and individuals save money and protect our climate through superior energy efficiency" (Energy Star 2015). Energy Star is a voluntary, government-sponsored program established in 1992 under the Clean Air Act Section 103(g) under the U.S. Department of Environmental Protection Agency (Energy Star

2015). By incorporating the use of Energy Star compliance into the FGLP application, a set of energy-efficient standards are applied to the properties that comply with the federal voluntary eco-certification program that seeks to promote energy efficiency. The Energy Star related requests were separated into four sections: front of house equipment, heating and cooling equipment, laundry and kitchen equipment, and other appliances.

6.2.1.5 Indoor Air Quality

Although the FGLP does not request specific statistics in regard to the quality of air at each certified property, the application does request a series of responses related to the air conditioner units, smoking at the facility, cleaners and the paint used at the hotel and mould/mildew prevention. "Over the past few decades, clean air practices have become increasingly important in progressive hotel management. These changes have not only led to an increase in energy efficiency and reduced exposure to health-related liabilities but have also created positive impacts on the 'bottom line' and higher employee and guest satisfaction" (FGLP 2012a, p. 21). The indoor air quality findings can be found in appendix two.

The majority (79%) of certified hotels reported that air handler units and coils are cleaned at least once a year, as well as following a preventative maintenance schedule and maintaining a record of activities for the same units. In addition, 59 percent of FGLP properties committed to air conditioner inspections for mould/bacteria, obstructions to airflow and ensuring clean drip pans.

Of the 20 questions included in the indoor air quality section of the FGLP application, six pertained to mould or mildew prevention. All but three of the 81 certified properties (96.3%) revealed that they regularly monitored for "signs of mold and replaced as necessary" (FGLP 2012a, p. 21) absorbent surfaces and 92.6 percent of hotels had "no visible mold or mildew" (FGLP 2012a, p. 21). 71.6 percent made sure that "high moisture areas" (FGLP 2012a, p. 22) are well ventilated.

6.2.2 Social Media Presence

"Hotel industry executives and managers have seen much anecdotal evidence that social media influence guests' booking behaviour—and thereby rate and occupancy" (Anderson 2012, p. 6) and previous studies have proven a connection between social media and improved customer relationship management (Rosman and Stuhura 2013), lodging performance (Anderson 2012) and the mechanism for gathering customer feedback (Salkhordeh 2009). In an effort to further understand social media's impact, a foundation of data was compiled which provided the social media profile for each of the 81 FGLP certified properties included in the study's sample. The web sites considered for inclusion were based on previous studies (O'Connor 2010; Chan and Guillet 2011; Anderson 2012; Rosman and Stuhura 2013) and are described in appendix three. The data were collected in September 2014 using the protocol outlined in section 5.7.1, which was similar to Chan and Guillet (2011) where "each hotel company was manually searched on selected SM sites," (p. 352) with each hotel search requiring approximately 30 minutes to complete. The study investigated seven social media sites and determined the following presence on each site (table 6.5).

Table 6.5 FGLP Hotels on Social Media

	Minimum	Median	Mean	Maximum
Twitter *55.6% of FGLP hotels have a registered account*				
Number of Tweets	0	8	1,004	15,500
Twitter Following	0	24	405	6,102
Twitter Followers	0	61	805	7,649
Facebook *92.6% of FGLP hotels have a registered account*				
Facebook Likes	0	1,059	5,053	78,026
Facebook 'Talking About'	0	81	362	7,227
Facebook Check-Ins	0	3,867	14,712	107,513
FourSquare *84% of FGLP hotels have a registered account*				
Score	0	7.3	5.9	9.5
Total Visitors	0	857	1,557	9,093
Total Visits	0	2,024	3,491	20,750
TripAdvisor *All of the FGLP hotels have a presence on this website*				
Number of Reviews	0	654	752	2,444
Overall Rating	0	4	4	5
YouTube *90% of FGLP hotels have a presence on the website*				
The Number of Video Descriptions that Include the Hotel Name	0	228	539.8	7,660
Pinterest *75% of FGLP hotels have a presence on the website*				
Flickr *90% of FGLP hotels have a presence on the website*				
Social Media Overview *66% of FGLP hotels are represented on at least six social media websites*				
Number of Social Media Sites in which FGLP Properties have a Presence	2	6.1	5.7	7

> "With the enormous amount of information potentially available to travellers, the internet constitutes an important platform for information exchange between the consumer and industry suppliers (e.g. hotels, transportation sectors, attractions), controllers (e.g. governments and administrative bodies), as well as many non-profit organizations such as destination marketing organizations" (Xiang and Gretzel 2010, p.180).

Most FGLP properties appear to have recognized the importance of having a presence on social media websites and therefore, 66 percent are represented on at least six social media websites (appendix three). Having a presence on several social media sites will "increase the likelihood" (Noone et al. 2011, p. 299) of shifting a web search into a reservation. This was further supported by Pat McInerney, senior account executive for Google travel, who revealed that the 84 percent of travellers who use the internet in trip preparation consult approximately 22 websites over a nearly two week period before completing a reservation (McInerney 2013). Therefore, having a presence on multiple sites makes it more likely to be reminded of a particular property. And while this study does not focus on the use of search engines, it should be noted that an increased presence of a hotel on various social media sites "play an integral role in a search engine optimization strategy" (Noone et al. 2011, p. 299).

In addition to having a presence on multiple social media sites, Anderson (2012) found that an increasing number of consumers are consulting user-generated reviews on travel sites, such as TripAdvisor.com before making a hotel reservation. This was also reinforced by Barsky and Nash (2010) when they found that 51 percent of the hotel selection process was based on guest experience factors, which included online guest reviews. Guest experience factors even outrank a hotel's physical location with 48 percent and price at 42 percent (Barsky and Nash 2010). The 2012 Cornell University study (Anderson 2012) quantified that a one point increase on a five point scale in customer review scores within the internet forum on TripAdvisor, enabled a property to charge an increase of 11.2 percent and "still maintain the same occupancy or market share" (Anderson 2012, p. 5). With only 3.7 percent of FGLP hotels achieving the highest score on TripAdvisor (appendix three), Anderson's (2012) findings reveal that FGLP hotels have room to increase profits while still maintaining occupancy rates and/or market share. Another study found that TripAdvisor achieved

a click-through rate of 20-30 percent to the hotel booking site (Krempl 2007), which adds another revenue strategy via links to the hotel inventory.

Still, Chan and Guillet (2011) assert that hotels do not have to have a presence on all social media sites, but it should at least consider participation if its competitors have a presence on a particular site. Still, hotels should develop a plan that best suits the traits of its brand, customers and even the staffing levels allocated to support the social media participation (Chan and Guillet 2011; Noone et al. 2011).

6.2.3 FGLP Hotel Primary Contact Web-Based Survey

Much RBT literature (Hart 1995; Russo and Fouts 1997; Rivera 2001; Rivera 2002; Graci and Dodds 2008, Hart and Dowell 2011) acknowledged the positive connection between a firm's performance and its sustainable efforts. Graci and Dodds (2008) concurred that "organizations could gain competitive advantage by participating in an environmental program to demonstrate good environmental performance. This would lead to financial benefits as these firms would have differentiated themselves in the market" (p. 257). Building on previous literature and using the theoretical foundation of RBT to determine if there was a connection, and hence a potential competitive advantage, among a hotel's environmental performance, economic results and social media presence, required the collection of all three elements.

The environmental performance outcomes were collated from FGLP eco-certification applications (section 6.2.1) and social media presence (section 6.2.2) gathered from each of the included websites in the study. While these secondary sources provided a wealth of data, economic results were not available via a secondary source and therefore had to be requested directly from the participating properties. Data were collected via an electronic survey distributed to each of the FGLP hotels, directed to a specific email address included on FGLP applications to gather the missing fiscal element. Since the main objective for the survey was to gather economic results, the researcher opted to keep the survey brief in an effort to increase the participation rate and therefore only seven questions were included in the online questionnaire.

After the pilot study (see section 5.7.1), data collection with the FGLP sample occurred from November 11, 2014 – December 19, 2014. Each of the 81 individuals listed as the primary contact on the FGLP application submitted in January 2014 were sent an email invitation from the researcher's official university email account to participate in the study. The email introduced the researcher, briefly described the aim of the study, explained the voluntary and anonymised nature of their participation and included a personalised web link to the survey (appendix four and five). The survey included two Likert-based questions, three questions seeking a numeric response and two open-ended, optional questions.

A reminder email was sent three times to individuals who had not already completed the survey. One individual selected to opt-out of receiving future email messages about the FGLP survey and three email accounts were no longer active. At the conclusion of the survey, the survey achieved a response rate of 63 percent, which consisted of 52 respondents from the 81 FGLP properties in the sample. In addition, while five questions in the survey required a response in order to complete the submission, two open-ended, optional questions reached 15.4 percent and 40.4 percent respectively by the respondents. The collective survey results "are generalized back" (Query et al. 2009, p. 83) to the overall FGLP sample.

Table 6.6 Analysis of Non-Response Data: Mean Variables of the Early and Late Respondents

Response Time	Social Media Staff	Average Occupancy Rate	Average Daily Rate (ADR)
Early Mean N=36	3.32	77.84	$175.05
Late Mean N=16	3.14	75.57	$169.91
Total Mean N=52	3.27	76.92	$172.40

The results were analyzed with a method used to detect non-response bias. The enquiry into potential non-response bias was conducted in waves as suggested by Armstrong and Overton (1977) and used by Vorhies and Morgan (2005) to benchmark marketing capabilities to determine competitive advantage. The evaluation reviewed the early responses and late responses to the web-based survey and found that no significant differences between the two sets existed. The responses were organized based on their arrival date; the first two weeks containing 36 respondents and the last two weeks containing 16 respondents. The study compared the mean scores of occupancy rates, ADR and the number of social media staff (questions 4, 5, and 6). As depicted in table 6.6, the calculations were similar and did not display significant variations between the two time frames, which demonstrates that a non-response bias is not a likely occurrence in the web-based survey.

Question One

The Florida Green Lodging Program website states that your certified hotel receives all of the following benefits. Please rate the benefits

1. Save money by reducing water and energy use and reducing waste generation
2. Provide a structure to evaluate the operations of a hotel, set goals and take specific actions to continuously improve environmental performance
3. Exclusive use of the Florida Green Lodging logo to attract eco-conscious customers
4. Receive marketing tools and technical assistance through the Florida Green Lodging website
5. Hotel featured on the Florida Green Lodging website
6. Permitted to host meetings and conferences for state government agencies
7. Conservation and protection of Florida's natural resources

Given that the three elements investigated in this study and included in the study's aim were broadly represented in the stated benefits that each FGLP program received, the researcher sought to determine how certified properties prioritized the benefits. Yet, Joann Shearer (2013b), the green lodging program coordinator for the FGLP revealed that the government agency had never polled certified properties to determine what each considered the benefits received via the certification. Instead, the benefits outlined on the FGLP website (FGLP 2013) were based on "what other similar green hotel programs express" (Shearer 2013b) on their websites or verbally.

Therefore, the survey needed to first establish if FGLP properties even acknowledged these attributes as benefits.

The design of the research question, which sought to understand the favourability level for each item was also deliberately included to calculate the reliability of the responses which proved to be successful in the pilot testing achieving Cronbach's alpha reliability median coefficient (Cronbach 1951) of r =.80. The score achieved in the pilot test surpassed the acceptable reliability coefficient of .70 established by Nunnaly (1978). Cronbach's alpha "estimates the proportion of the test variance due to all common factors among the items" (Cronbach 1951, p. 320). Unfortunately, the median coefficient fell short in the study by only reaching r =.408 While similar studies reach a reliability score of r =.90 (Kayaman and Arasli 2007) or from r =.71 to r =.92 (Molina-Azorín et al. 2009), the lagging internal reliability score in first question of the survey could indicate the inappropriate inclusion of a particular benefit within the FGLP, which should be the grounds for further testing in future studies that include the assessment of eco-certification scale of benefits in its scope of research (section 7.7).

A Likert rating scale (Fink 2013) was implemented, which allowed the certified hoteliers to use an ordinal scale to convey, "how closely they agree or disagree with a statement" (Fink 2013, p. 45). The survey respondents were asked to assess each FGLP benefit individually with a number from one to five, where a score of one represented "very important," three represented "moderately important" and five represented "not important". The results for the first question were analyzed as ordinal data because the researcher could not validate "that respondents perceive the difference between adjacent rating points as equidistant" (Fink 2013, p. 45). The question required a response for each FGLP benefit before the survey could be submitted, but the electronic survey displayed the seven benefits in a randomized manner so as to reduce biases for a particular benefit.

The results of the 52 respondents are displayed in figure 6.1 and exhibit a majority approval in six of the seven benefits. In fact, one benefit achieved the highest rating by all but one respondent. Yet on the opposite perspective, one named benefit that was not considered "very important" by a majority of respondents was:

> "Provide a structure to evaluate the operations of a hotel, set goals and take specific actions to continuously improve environmental performance"

Figure 6.1 visually displays the results that FGLP properties consider the benefits they receive from the their participation in the eco-certification program. The colouring demonstrates the level of importance that the respondents indicated in the online survey. While some benefits were considered more important than others, all of the benefits received at least a score of one through three by a majority of the respondents, demonstrating that all of the benefits are considered important or moderately importantly by a majority of FGLP properties.

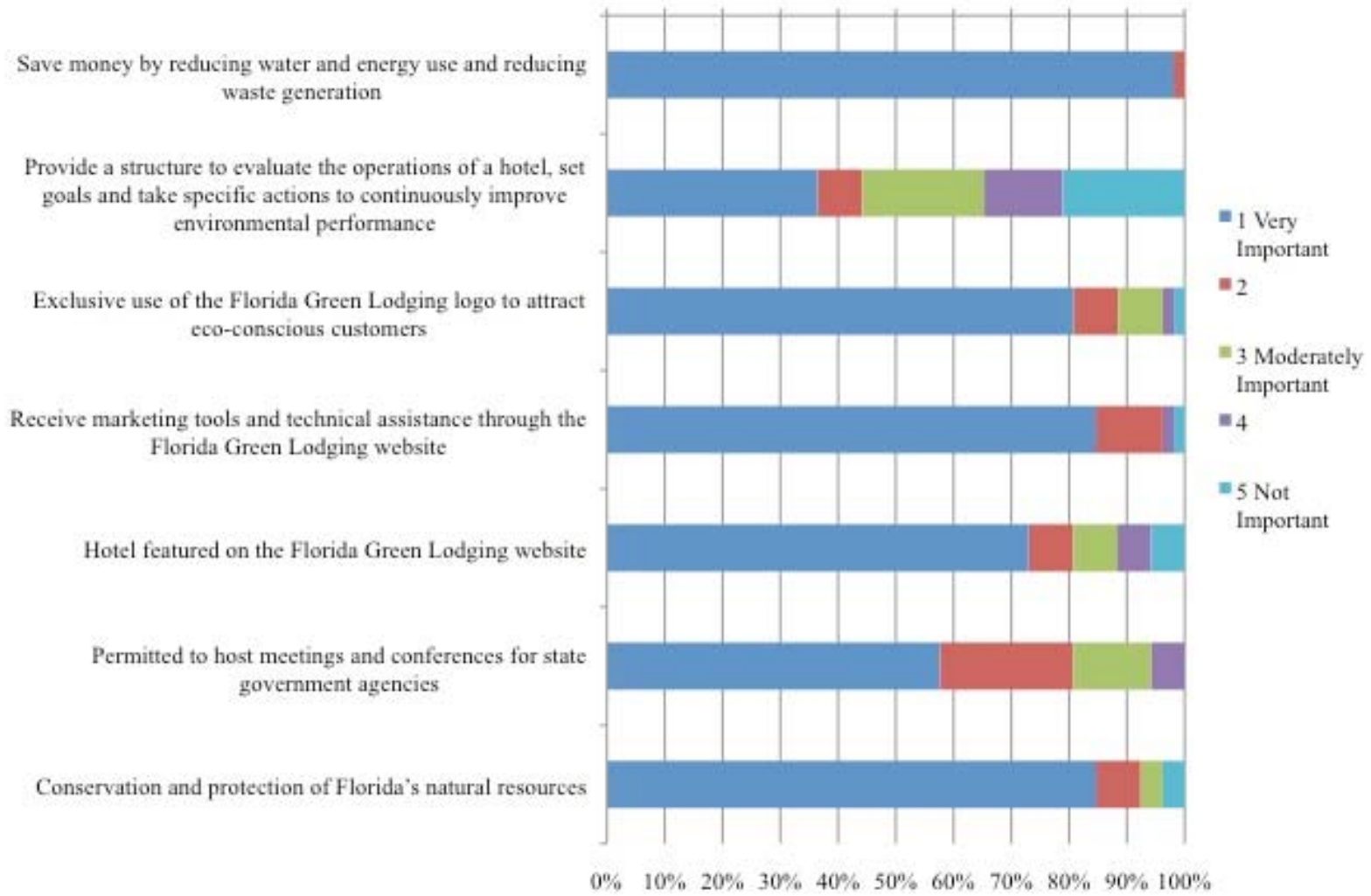

Figure 6.1 Bar Graph of Results for Survey Question One —Rating of FGLP Benefits

Question Two

The Florida Green Lodging Program website states that your certified hotel receives all of the following benefits. Please rank them from 1 to 7 by putting the relevant number in the adjacent box, with 1 being the top benefit and 7 offering a lesser benefit.

1. Save money by reducing water and energy use and reducing waste generation
2. Provide a structure to evaluate the operations of a hotel, set goals and take specific actions to continuously improve environmental performance
3. Exclusive use of the Florida Green Lodging logo to attract eco-conscious customers
4. Receive marketing tools and technical assistance through the Florida Green Lodging website
5. Hotel featured on the Florida Green Lodging website
6. Permitted to host meetings and conferences for state government agencies
7. Conservation and protection of Florida's natural resources

The second question reverts back to the original query briefly described in the first question before it was discovered that the FGLP properties might not recognize the proposed benefits that the certification program claims. Therefore, this question sought to understand how certified properties prioritized the FGLP benefits by "comparing one factor to another" (Fink 2013, p. 46).

The results of the ranking order for the 52 respondents are displayed in figure 6.2. The frequency of the results, presented in percentages, exhibit that two benefits are very close in the number one ranking position. The top ranked benefit for hoteliers, of saving money, also received the top position in question one, which indicated a strong level of consistency in the results (Lind et al. 2008). Whereas the other close ranking score in the top position, the FGLP website benefit, did not achieve as high marks in question one, but the results for this benefit were still positive in question one. Sitting in sharp contrast, the FGLP benefit of offering structure to evaluate a hotel's operations, matched the lowest ranking score for both question one and two, demonstrating the respondent's unconstructive opinion of the benefit. Yet, this match also indicated a strong level of consistency of the findings (Lind et al. 2008), despite the negative nature of the results.

Figure 6.2 visually displays the ranking results of the seven benefits that the FGLP claims to offer certified properties. The colouring demonstrates the level of importance that the respondents indicated in the online survey. The darker the colour in each bar indicates the greater the importance placed on that benefit. Four of the seven benefits were ranked in categories one through three by at least a majority of respondents. These benefits included:

- Save money by reducing water and energy use and reducing waste generation
- Receive marketing tools and technical assistance through the Florida Green Lodging website
- Hotel featured on the Florida Green Lodging website
- Conservation and protection of Florida's natural resources

Interestingly, two of the benefits involve marketing opportunities and two benefits concern the conservation of resources for either environmental or financial advantage.

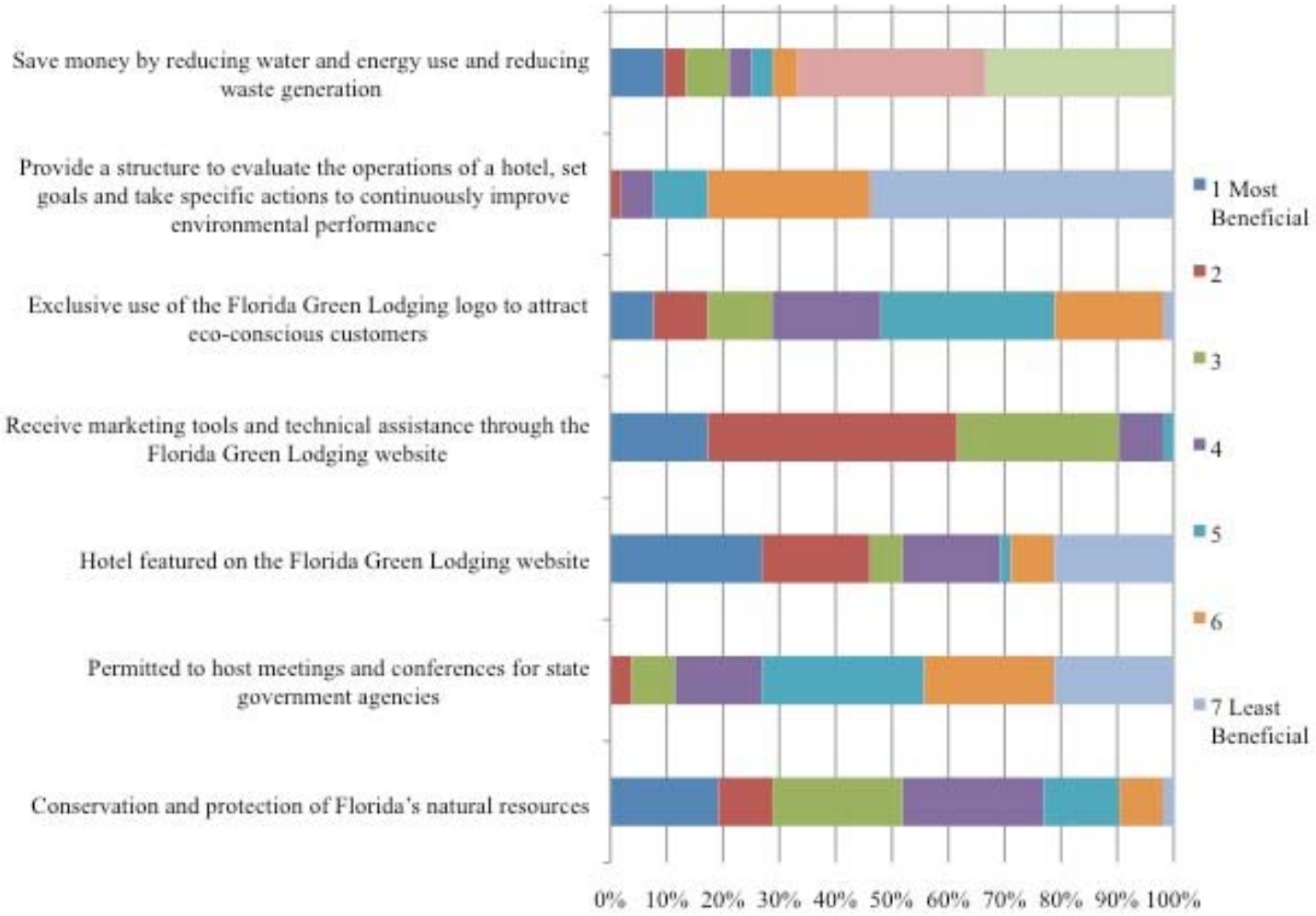

Figure 6.2 Bar Graph of Results for Question Two—Ranking of FGLP Benefits

Question Three

Are there other benefits you feel your hotel receives from the Florida Green Lodging Program, but are not listed above?

Seeking additional insight about the benefits that FGLP hoteliers consider they receive, question three was included as an open-end question where the primary contact was permitted to submit a comment about other benefits that they feel they receive as an FGLP hotel. Fifteen percent of respondents or eight hoteliers opted to provide a comment that ranged from complimentary statements to critical assessments of FGLP benefits (see section 6.4.1 and appendix six and seven).

While six of the eight comments provided approving comments, such as the FGLP benefits "helps to bring staff awareness" and "it's a good reminder for staff members of our environmental initiatives." The remaining two comments were critical of the marketing tools and technical assistance benefit. One stated, "what marketing tools and technical assistance? I would rank this much higher if it actually existed." The other comment was critical, but offered the specific solution of "how about some real help that allows our hotel to integrate our corporate logo and the Florida green logo. We could also use some ideas that we can use on our in-house television channel and on our Facebook page."

Question Four

How many staff members are dedicated to social media efforts at your hotel?

Gaining the understanding about the number of staff members responsible for the social media efforts at each FGLP properties, enriched the numeric social media data collected from each website. The findings reveal a rather divide in the number of employees supporting the social media effort (depicted in table 6.9) with 44.2 percent of properties concentrating the responsibility to one or two individual. Whereas, 40.4 percent of FGLP hotels utilize the efforts of five or more staff members to remain connected on its social media websites.

Table 6.7 Frequency Table for Survey Question Four—Number of Staff Members Dedicated to Social Media Efforts

	Frequency	Percent	Valid Percent	Cumulative Percent
1 Person	9	17.3	17.3	17.3
2 People	14	26.9	26.9	44.2
3 People	4	7.7	7.7	51.9
4 People	4	7.7	7.7	59.6
5 or More People	21	40.4	40.4	100.0
Total	52	100.0	100.0	

Noteworthy of this question is the disparity between the hotels in the pilot study and the study's sample. The individuals at the hotels in the pilot study indicated that the responsibility of social media efforts only fall to a few key employees to ensure consistency and control over the communication channels and would likely not exceed five personnel, but the study findings exposed the opposite. In retrospect, the question should have provided an open-ended option to request a more specific number.

Question Five and Six

What was your average occupancy rate for 2013? (i.e. percentage between 1-100)

What was your average daily rate (ADR) for 2013? (i.e. dollar amount)

"Hotel operators and investors use a number of industry statistics as benchmarks to assess current operations and to make forecasts and plans. Three commonly used statistics are occupancy rate, average daily rate (ADR), and revenue per available room (RevPAR)" (Enz et al. 2001, p. 22). Questions five and six collected the occupancy rate and ADR from each FGLP property. Occupancy rate is generated by dividing the rooms occupied by the total number of rooms available and then divided by 100 (Reid and Bojanic 2010) and ADR is just the mean daily rate charged for a hotel room over a specified time period (Reid and Bojanic 2010).

Next, the researcher calculated the RevPAR using the equation employed by Reid and Bojanic (2010) and Cornell University Center for Hospitality Research studies (Smith 2009; Enz 2011; Anderson 2012; Blal and Sturman 2014) that tracks the market information of the hotel industry (STR Global 2015). The RevPAR results are

"calculated by multiplying the average daily rate by the occupancy percentage" (Reid and Bojanic 2010, p. 306) (section 5.7.2.1). When RevPAR is tracked over a period of time, an increasing number would indicate a "more effective use of available resources" (Reid and Bojanic 2010, p. 306). Although it should be noted that RevPAR only accounts for a property's revenue accumulated from letting rooms and excluded earnings from the other hotel amenities such as restaurants and recreational facilities.

The findings for question five, which requested the occupancy rate from each FGLP hotels, found rates that ranged from 50 percent to 96 percent, but reached a mean of nearly 77 percent (table 6.8). Question six sought the property's ADR, which collected results that spanned from $80 up to $785, with a mean of $172 (table 6.8). Utilizing the collected results from questions five and six, the researcher compiled the RevPAR for each property that achieved results, which ranged from $42.40 up to $612.30 with a mean of $137.76 (table 6.8).

Table 6.8 Frequency Table for Survey Questions Five and Six—Occupancy Rate, ADR and RevPAR

		Average Occupancy Rate	ADR	RevPAR
N	Valid	52	52	52
	Missing	0	0	0
Mean		76.92	$172.4038	$137.7577
Median		77.50	$133.5000	$98.0750
Mode		70	$200.00	$144.00
Minimum		50	$80.00	$42.40
Maximum		96	$785.00	$612.30

Question Seven

Are there any changes you would recommend to improve the Florida Green Lodging Program?

The last question of the electronic survey requested any comments about the FGLP in an open-ended format. 21 individuals, or 40.4 percent of respondents opted to submit a comment that ranged from positive to negative sentiments about the program, but also included recommendations to further enhance the FGLP. While the comments spanned a variety of topics, one topic captured 19 percent of all of the remarks. The

FGLP website was the source of concern for respondents, which claimed 689 Florida properties, divided into six regions that were certified by the program (FGLP 2013). The comments included "you only ask about the Audubon program, what about all of the other green or charitable groups our hotel support" and "we would like regular communications with the Florida lodging program." Yet, also included were rather harsh comments about the FGLP website such as "please put an end to the lies only the certified hotels have earned the right to be there" and "please update your website with the actual properties that have complied with the new application process. You are years behind. Let's keep it real!" Other comments included requests for further enhancements to the program of "how about an online shop to purchase Florida green lodging logo merchandise for us to display on property," "more understanding for smaller properties" and "I would like to see a monthly or even quarterly newsletter." All of the remarks are included in appendix six and seven.

Follow-Up Questions

> **Are you interested in participating in a brief 5-10 minute telephone interview that will focus on the Florida Green Lodging Program and your hotel's involvement?**
>
> **If you would like to receive a summary of these results and the related research, please enter your e-mail address.**

At the conclusion of the survey, respondents were asked if they were willing to participate in a future telephone interview and/or if they were interested in receiving an overview of the study's findings. Five respondents indicated their willingness to participate in a telephone interview and seven respondents expressed the desire to receive the study's findings.

6.3 Quantitative Phase

While the study employed mixed methods to achieve its aim, a greater focus was placed on the quantitative findings (figure 5.2) to initially determine if correlated relationships existed and to statistically explain how the correlated relationships impacted an eco-certified property. The multiple statistical treatments are reviewed and discussed in this section.

The use of quantitative methods has a dual role (Cowan 1990) in research studies. The first of which is described as the "modelling role" (Speed 1994, p. 89), demarcated by the development of a framework or description set out to determine "something interesting and useful about the world we see around us" (Speed 1994, p. 89). This study developed a theoretical framework to provide "interesting and useful" (Speed 1994, p. 89) findings that held the potential to impact the economic and environmental performance (figure 2.1) segments of the triple bottom line of eco-certified hotels. The second role of quantitative methods is labelled as the testing role (Cowan 1990) because it seeks to determine the validity and strength that may exist between two variables. The testing role is the application of statistical examination and analysis. "Quantitative research must show both excellent modelling and excellent testing" (Speed 1994, p. 89).

The methods employed in this study collected 25,023 variables. While each of these variables was evaluated and accounted for in the descriptive findings (sections 6.2.1—6.2.3 and appendix two, three, six, seven), which provided a solid understanding that did not prior exist about the FGLP, only a portion of these variables were included in the study's analysis to achieve the aim. The narrowed set of variables of 1,434, which formulated the components included in the study's theoretical framework, was determined based on the three elements highlighted in the study's aim to determine if a relationship existed among environmental performance, economic results and social media presence. Two of the three elements were acquired from secondary data provided by the eco-certified properties via the FGLP application and the metrics available on the social media website for each of the corresponding eco-certified properties. The final element was collected via a web-based survey.

An investigation seeking relationships may include "different combinations of variables" (Speed 1994, p. 101). Speed's (1994) assessment of relationship analysis supported the study's testing of multiple independent and dependent variables included in the research hypotheses (section 5.3) and depicted in the study's theoretical framework (figure 6.3). The multiple variables included in the study sample were subjected to the statistical techniques outlined in table 6.9.

Table 6.9 Statistical Methods Employed in Study

Statistical Technique	Description
Descriptive Statistics	Analysis of data to describe the central tendencies and the spread of statistics to better understand the raw data relating to the properties of the FGLP in a meaningful way.
Non-Response Bias	The evaluation reviewed the early responses and late responses of the web-based survey and found no significant differences between the two waves of data based on the responses to three questions included in the web-based survey.
Cronbach Alpha	Used to measure the reliability and internal consistency of a construct. In the case of this study, the evaluation was conducted on the scaled response of the first question in the web-based survey and revealed a lagging reliability score of r =.408, which fell below the acceptable alpha reliability coefficient of r =.70 (Nunnaly 1978). Therefore, the results from the first question were not included in the analysis to avoid concerns about the reliability of the findings that used these results.
Levene's Test of Homogeneity	The test determined if the study's dependent variables exhibited an equality of variances compared to the independent variables. In the case of this study's sample, the test revealed that the data set contained variables that were equally distributed, which was reflected with a low significance value.
Multicollinearity	The assessment reviewed the independent variables to determine if any combination of these variables were highly correlated, and in turn reflected an elevated Variance Inflation Factor. Such collinearity can impact the outcome of multiple regression analysis. This study contained two variables that were highly correlated. The issue was corrected with the elimination of one independent variable, which was not ideal but the alternative of increasing the sample size was not a viable option.
Outlier Labeling Rule	The test applied a quartile rank to each variable, which calculated both the upper and lower fences of the data set. Results that extended beyond the variable-specific fence were considered outliers. The study identified 40 outliers from 13 variables.
Winsorisation	A technique applied to replace the identified 40 outliers with the closest numeric result in the accepted sample set, to ensure that each variable maintained its robust and comparable sample size.

Backward Regression Analysis	The stepwise regression procedure tested each variable one at a time, eliminating the weakest independent variable until only statistically significant variables remain. These remaining independent variables formed the model for each of the study's six hypotheses, which statistically predicted the likelihood of the attaining the designated dependent variable.

The results for each of the statistical techniques outlined in table 6.9 have been incorporated into the study's final results except for one, the outcome of the Cronbach's Alpha, which was applied to the first question of the web-based survey both in the pilot study and with the study's sample. The statistical method originated by Cronbach (1951) was designed to measure the reliability of scaled or dichotomous responses and was employed in this study to measure the favourability of FGLP benefits. Cronbach's alpha "estimates the proportion of the test variance due to all common factors among the items" (Cronbach 1951, p. 320). Alpha coefficients span a value from zero to one, where the higher the score indicates the greater reliability of the measured scale.

An acceptable alpha reliability coefficient should reach r =.70 (Nunnaly 1978) and the pilot study reached a score of r =.80, whereas the study's sample only achieved a score of r =.408. Therefore, the researcher opted to not include this measure in the assessment of the study's aim. Initially, the researcher considered using the findings from the first question of the survey as a situational control variable that might affect the property's performance (Aaker 1988, 1989) due to the inclination and/or beliefs of leadership at a property. For instance, if a property believed the most important benefit of the FGLP was the "conservation and protection of Florida's natural resources" (FGLP 2013), it might reflect a more conservative use of utilities compared to a property that top ranked the benefit of "permitted to host meetings and conferences for state government agencies" (FGLP 2013). These control variables could have also offered another view or vantage point to enhance the descriptive analysis, meaning that a leader's perceived top or bottom benefit could influence the environmental performance (variables included in H6), RevPAR and/or social media participation. Unfortunately, due to the lagging reliability score of r =.408, these control variables were not applied to the data because of the lacking internal

consistency uncovered in the alpha coefficient. If the researcher had proceeded with the findings from the first question in the web-based survey with the low alpha coefficient, the reliability of the findings would have been questionable for each analysis it was applied to. The researcher concluded that the elimination of these statistically weak findings would not impact the aim of the study since it was not directly related to the three elements of environmental performance, economic results and social media presence.

Instead, the outcome of the survey's first question could be the basis for further testing in future studies that include a scale assessment of benefits an eco-certification provides in its scope of research. Future assessments might also consider collecting direct feedback from eco-certified hoteliers to determine the benefits they feel they currently receive and what benefits they aspire to receive, considering the FGLP never requested feedback about the benefits of the program (Shearer 2013b). Although this study did have FGLP properties rank the outlined benefits in the second question of the web-based survey and provided an open-ended question, which sought to gather additional benefits they felt were missing. A qualitative approach involving conversation may have uncovered additional benefits.

It should be noted that initially, the researcher reviewed the available variables and considered the use of methods including Pearson's Correlation to highlight the potential relationship between the three elements outlined in the study's aim. At that stage, the researcher determined that the addition of data, specially the addition of the economic outcomes of the FGLP properties, would enhance the findings and further connect the study to previous studies and back to the triple bottom line (figure 2.1). Yet, the outlined statistical path explained in chapters five and six were implemented because "the researcher must seek out the method of analysis that yields the best results" (Speed 1994, p. 101) and with the study's aim and the given variables at the start of the study, the researcher felt the statistical techniques included in this study were the appropriate methods to produce "the best results" (Speed 1994, p. 101). While there could have been other methods applied, additional questions asked or even a different sample selected, these retrospective views provide cause for reflection and offer supplementary considerations for future studies.

6.3.1 Error Limiting and Outlier Reduction Procedures

Before proceeding with regression analysis, the presence of multicollinearity and homoscedasticity were tested on each research question. While homoscedasticity (Breusch and Pagan 1979) revealed no threats to the study's validity using Levene's test of homogeneity, the investigation of multicollinearity did exposed concerns. The enquiry into multicollinearity, which mirrors Shan and Taylor's 2014 study was implemented to "account for measurement error and manage multiple endogenous constructs" (Grewal et al. 2004, p. 519). Multicollinearity detects, "high correlations among the latent exogenous constructs," (Grewal et al. 2004, p. 519), which is a consideration due to the number of independent variables included in the study's social media set. If multicollinearity is not addressed, regression findings may produce results that provide erroneous outcomes of coefficients and even incorporate standard errors in these calculations (Mason and Parreault 1991; Grewal et al. 2004)

The investigation into the possibility of multicollinearity in the six hypotheses uncovered that two independent variables (FourSquare-Total Visitors and FourSquare-Total Visits) amassed elevated Variance Inflation Factors (VIF) effects that needed to be addressed. The numeric outcome for VIF revealed a factor of 92.013 for FourSquare-Total Visitors and 87.344 for FourSquare-Total Visits (appendix twelve), where Mason and Parreault (1991) proffer that a "maximum VIF greater than 10 is thought to signal harmful collinearity" (p. 270). The harmful collinearity between these two predictor variables exposes an "approximate linear relationship" (Mason and Parreault 1991, p 269) that could provide "misleading" (p.268) multiple regression results. Therefore, in an effort to manage the collinearity, each variable was independently removed and recalculated to monitor the VIF. After interpretation of the results, the researcher determined that the highest VIF (FourSquare-Total Visitor) should be removed, which then uncovered a set of variables that did not exhibit any extreme multicollinearity that might impact the multiple regression results (Mason and Parreault 1991; Grewal et al. 2004). The updated VIF for the independent variables now ranges from 9.408-1.375. While the removal of the variable does limit the findings because it is one less source of data to review, three additional measures are still included for the FourSquare website and the updated variables provided the

foundation for a stronger regression model for each of the six hypotheses (Mason and Parreault 1991).

While one variable was removed to reduce the multicollinearity effects, another variable was not included in the analysis. The independent variable that measured the presence on the TripAdvisor website was not considered in the analyzed data for the hypotheses because the results of the variable were constants, across the entire data set. This meant that every FGLP had a presence on the TripAdvisor website. While the variable is not included in the study's analysis, the measurement will be considered and included in the study's findings.

The remaining ratio variables were subjected to the outlier labeling rule (Hoaglin et al. 1986; Hoaglin and Iglewicz 1987; Sadatsafavi et al. 2015), which applied the quartile rank from each variable to calculate both the upper and lower fences for the data set, and ultimately "observations that are extreme enough to be potential outliers" (Hoaglin and Iglewicz 1987, p. 1147). The groundwork for the outlier labeling rule was proposed by Tukey (1977), but was later modified (Hoaglin et al. 1986; Hoaglin and Iglewicz 1987) to return more reliable results. This outlier detection technique, used in previous studies (Dheer et al. 2014; Sadatsafavi et al. 2015) provided the upper and lower boundaries or fences for the variables and identified 40 outliers (table 6.10). In an effort to reduce the effect of the extreme values, the identified outliers were amended using the winsoration procedure that was also implemented in other studies within the hospitality industry (Verma et al. 2012; Singh et al. 2014; Singal 2015). Instead of trimming the outlier, the technique replaced each extreme variable with the closest variable in the accepted sample set, to ensure that the research models maintain their robust and comparable sample size.

Table 6.10 Number of Outliers for Each Variable

Variable	Number of Outliers
RevPAR	2
% Recycled	3
Cost of Water	2
Cost of Waste	2
Cost of Energy	1
Twitter Number of Tweets	2
Twitter Following	7
Twitter Followers	4
Facebook Likes	5
Facebook Talking About	6
Facebook Check-ins	2
YouTube Number of Videos	3
FourSquare Total Visits	1

The data outlined in sections 6.2.1—6.2.3 was analyzed to determine if a relationship does exist among the named variables (figure 6.3) that might lead to such a way to creatively utilize, bundle and promote its resources and capabilities in order to achieve a competitive advantage that is desired under the RBT theoretical framework (Barney and Hesterly 2012; Kozlenkova et al. 2014). Sections 6.3.3.1—6.3.3.6 will establish the quantitative relationships, while 6.3.3.7 will provide an overview and explanation of the numeric findings.

6.3.2 Regression Analysis

After applying error limiting and outlier reduction procedures (section 6.3.1), regression analysis was employed to investigate the possibility of relationships based on the literature review, with a theoretical underpinning of RBT. This study sought to establish the statistical connection among variables that had not yet been tested between environmental performance, economic results and social media presence at eco-certified hotels. The tested variables, displayed in figure 6.3 were subjected to path-analysis, specifically a stepwise multiple regression technique that applied

backward regression to statistically determine the independent variable and/or variables that best predict a dependent variable (Field 2013; Pallant 2013). Stepwise backwards regression analysis implements a deductive procedure of the variables included in a study to determine the most robust model for each hypothesis, "based on a purely mathematical criterion" (Field 2013, p. 322). It is used to test how well the independent variables are related to the dependent variables. The independent variables are commonly referred to as the predictor and the dependent variables as the outcome (Vogt 1999; Sekaran 2000).

The use of the aforementioned statistical technique follows the procedure that Shan and Taylor (2014) implemented to determine statistical significance between corporate social responsibility and environmental disclosure, which "involves starting with all candidate variables and testing them one by one for statistical significance, deleting any that are not significant" (Shan and Taylor 2014, p. 273) and repeating the process until a robust model was established. While stepwise regression analysis has its critics (Huberty 1989), Field (2013) acknowledged its beneficial qualities in exploratory research and the use of this technique is familiar among tourism researchers (Kim and Kim 2005; Lee et al. 2011; Bond et al. 2014; Taylan Dortyol et al. 2014). "Stepwise regression procedures are utilized to ensure that the final regression model provides for the best fit of raw data" (Hamby 1994, p. 145), which provided this study with an established analysis to determine the specific independent variables that statistically impacted each dependent variable. While solely quantitative research, such as the regression analysis used in this study, holds the weakness of producing only statistical results, the numeric findings allow theoretical questions to be tested to determine if indirect relationships emerge to either prove or disprove these theoretical notions (Bryman and Cramer 2005; Pallant 2013).

When interpreting the stepwise backward regression results, many figures must be considered and evaluated to determine how each interacts with the other. This section provides a brief digest of the numeric figures that are examined in sections 6.3.3.1—6.3.3.6 and provides an amended graphic explanation (figure 6.3) from the original explanation (figure 5.1) of the theoretical framework used to test the six hypotheses developed to understand the relationship between environmental performance,

economic results and social media presence. The amended figure (6.3) implemented the error limiting procedures and therefore removed two of the independent variables outlined in section 6.3.1.

The goal of regression analysis is to develop a model to predict the outcome of a dependent variable using independent variables. An important factor in this model is the R-score and the R-score squared, which measures how well the independent variables predict the dependent variable's outcome. R is the coefficient that denotes the correlation between the variables and is the statistical calculation referred to as the Pearson correlation coefficient (Field 2013). The R represents a number that ranges from -1 to 1, with 1 indicating a significant positive correlation and -1 indicating a significant negative correlation. A value of zero signifies that there is no relationship between the variables. The R-squared figure is the fraction of variance of the dependent variable that can be predicted and/or explained by use of the independent variables (Field 2013). It is also known as the coefficient of determination (Nagelkerke 1991) and "is well established in classical analysis" (Nagelkerke 1991, p. 691) making it "useful as a measure of success of predicting the dependent variable from the independent variables" (Nagelkerke 1991, p. 691). The calculation of R-squared in multiple regression analysis is inclusive of all of the individual independent variables incorporated in the model and is denoted in the coming sections with "R^2" and followed with the numeric result (i.e. R^2=.845).

While correlation, or the R-score, is insightful, it is also important to pair this numeric outcome with the significance of the correlation to determine if the result is coincidental or if it is likely to be repetitive. This study adopted a five percent probability scale (Sekaran 2000; Field 2013), which means that any numeric result that exceeded .05 in the significance column in the coefficient table during the analysis in SPSS was deemed to not have a strong connection and was therefore disregarded. "This indicates that 95 times out of 100, we can be sure that there is a true or significant correlation between the two variables, and there is only a 5 percent chance that the relationship does not truly exist" (Sekaran 2000, p. 402). The numeric figure that meets the study's qualification asserts that there is an association between the independent and dependent variable that is statistically significant. The

significance score, also referred to as a p-value, is denoted in the coming sections with the letter "p" and is proceeded with the greater than or less than mark, which is directly followed by the numeric figure (i.e. $p < .05$).

Another numeric figure that was considered is the b-coefficient, which predicts the rate the dependent variable will increase or decrease in relation to the independent variable. This figure is sometimes expressed as the gradient nature of the regression line when charted and numerically displayed on the SPSS-produced coefficient table. These numbers are presented as standardized and unstandardized, and while this study places greater emphasis on the unstandardized figure, it is important to clarify the properties of each. The unstandardized results, represented with the capital letter B, are calculated using the variable's original unit of measure (i.e. dollars, number of participants) and demonstrate that one unit of measurement of the independent variable can predict the increase/decrease of the unit of measurement of the dependent variable. Whereas standardized results, represented with the Greek letter Beta, have had all variables converted into z-scores, which displays the results in standard-deviation units of measure across the analysis and not the original unit of measurement. In the end, the researcher opted to view the results of the unstandardized b-coefficient because it revealed realistic results tied to easily understood units of measure and considered each independent variable separately instead of converting the variables to a common metric (Field 2013). In particular, in this study, all of the hypotheses except H2 use U.S. dollar as the unit of measurement for the unstandardized b-coefficient. Whereas, the H2 unstandardized b-coefficient is organized as the percentage of recycled, reused and/or composted compared to overall waste. The unstandardized b-coefficient is denoted in the coming sections with the letter "B" and followed with the numeric result (i.e. B=.075).

Collectively, the previously described findings are organized to construct models that demonstrate the statistical significance that exists between the independent and dependent variables after the application of backwards regression analysis.

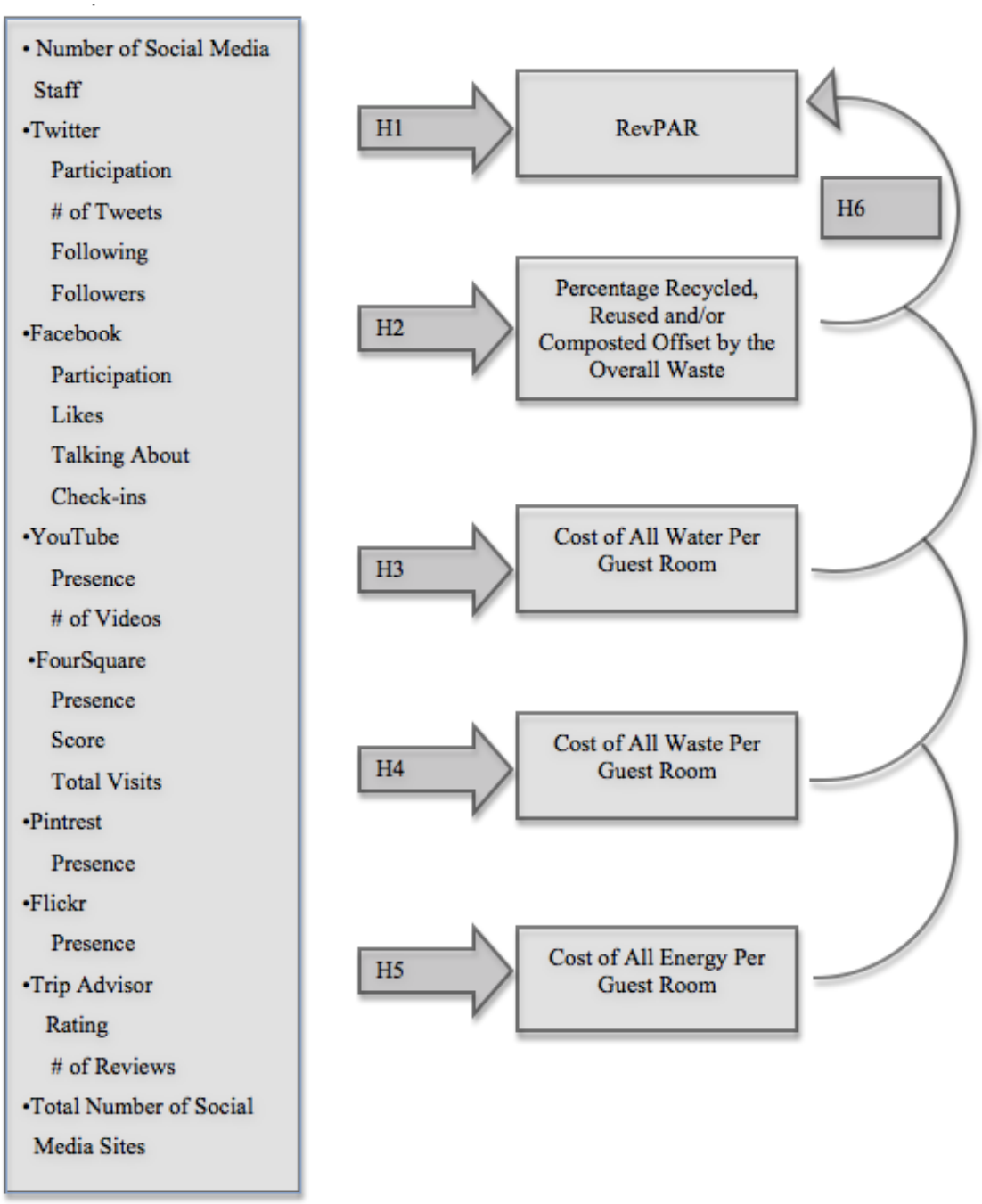

Figure 6.3 Adapted Theoretical Framework Used to Determine the Relationship Among Environmental Performance, Economic Results and Social Media Presence

6.3.3 Hypotheses Testing

6.3.3.1 Hypothesis 1: There is a Positive Relationship Between Social Media and RevPAR

There is a positive relationship between social media and RevPAR

Multiple regression analyses were conducted to determine if the value of RevPAR was related to a property's social media participation. The overall regression model was statistically significant with $F(18,32) = 5.136$, $p < .000$, $R^2 = .743$. As a group, the study's social media variables demonstrated a significant association with RevPAR when collectively reviewed in the ANOVA and model summary tables. The result of $R^2 = .743$ indicated that 74 percent of the variance in RevPAR could be explained by the overall social media model. Yet, differences were revealed when each variable was individually reviewed in the coefficient table. Three of the independent variables initially demonstrated statistical significance probability. The initial independent variables of significance include the *Twitter-Followers* ($B = .066$, $p < .008$); *YouTube-Presence* ($B = -98.168$, $p < .014$); and *Total Number of Social Media Sites* ($B = -50.596$, $p < .026$).

After the initial model construction, the independent variables were eliminated one at a time deducting the highest significance score in the coefficient table that was not statistically significant until only significant variables remained. During this process, R^2 went through the following transformation in the change of variance (.743, .743, .743, .740, .737, .733, .729, .727, .726, .719, .712, .700, .682, .665). It took 14 models to develop the strongest model via backwards regression analysis that maintained an overall $p < .000$. Such a value demonstrated that there was a 100 percent probability of correlation of the first hypothesis model will occur by chance. The repeated process exposed the final collective model in response to hypothesis one:

$$F(5,45) = 17.832,\ p < .000,\ R^2 = .665$$

The R^2 result of .665 illustrates that 66 percent of the total variance in RevPAR can be explained using the social media model in table 6.11. The final model for the first

hypothesis contains only the independent variables that demonstrated a statistically significant connection to RevPAR, which increased from the initial three to a total of five variables.

Table 6.11 Final Variables for Hypothesis One—There is a Positive Relationship Between Social Media and RevPAR

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
14	(Constant)	266.550	71.288		3.739	.001
	Twitter_ Followers	.063	.013	.626	4.792	.000
	FB_Likes	.014	.003	.677	4.476	.000
	YouTube (Presence)	-71.116	33.152	-.244	-2.145	.037
	YouTube_ Videos	-.043	.019	-.283	-2.275	.028
	Total Number of Social Media Sites (Out of 7)	-32.148	12.287	-.406	-2.616	.012

Multiple regression analysis denoted that *Twitter-Followers* (B=.063, $p < .000$) and *Facebook-Likes* (B= .014, $p < .000$) are significantly and positively associated with RevPAR. While *YouTube-Presence* (B= -71.116, $p < .037$); *YouTube-Number of Videos* (B= -.043, $p < .028$) and *Total Number of Social Media Sites* (B= -32.148, $p < .012$) are significantly related, these independent variables demonstrated negative relationships. Therefore the findings for the first hypothesis were mixed, with two independent variables that demonstrated a positive relationship and supported the hypothesis and three independent variables that demonstrated a negative relationship and rejected the hypothesis. The analysis also concluded that the following variables did not show significant probability in its association with RevPAR and were therefore not included in the final model:

Table 6.12 Excluded Variables for Hypothesis One—There is a Positive Relationship Between Social Media and RevPAR

Model		Beta In	t	Sig.
14	Twitter (Participation)	.137[o]	1.014	.316
	Twitter_Following	-.026[o]	-.156	.876
	Facebook (Participation)	.041[o]	.416	.679
	TA_Reviews	.046[o]	.336	.738
	FourSquare (Presence)	.102[o]	.994	.326
	TA_Rating	.103[o]	1.130	.264
	FB_Checkins	-.130[o]	-.914	.366
	Number_of_Tweets	.043[o]	.248	.805
	FB_Talking_About	-.033[o]	-.187	.852
	FourSquare_Score	.092[o]	.684	.498
	Social Media Staff	.109[o]	1.046	.301
	Flickr (Presence)	-.069[o]	-.714	.479
	FourSquare_Total_Visits	-.167[o]	-1.413	.165
	Pinterest (Presence)	-.161[o]	-1.564	.125

6.3.3.2 Hypothesis 2: There is a Relationship Between Social Media and the Percentage Recycled, Reused and/or Composted

There is a relationship between social media and the percentage recycled, reused and/or composted offset by the overall waste

Multiple regression analyses were conducted to determine if the percentage of recycled, reused and/or composted offset by the overall waste disposed of in the landfill was related to a property's social media participation. Hypothesis two demonstrated no statistical significance with $F(18,32) = .274$, $p < .997$, $R^2 = .134$. The social media variables demonstrated no significant association with the percentage recycled, reused and composted offset by the overall amount of waste when collectively reviewed. Even when the independent variables were individually reviewed in the coefficient table, none of the variables complied with the research protocol of $p < .05$. The individual significance results ranged from .418 - .982. While

these results could have ceased further liner regression analysis, the researcher applied the backward regression analysis to the variables.

The initial R^2 score of .134, which was inclusive of all of the social media independent variables, indicated a very slight correlation to the percentage recycled, reused and/or composted offset by the overall waste. Yet after the application of 19 backward regression models, R^2 went from .134 to .000 and revealed that there was even less of a relationship between the independent and dependent variables. The R represents a number that ranges from -1 to 1, which would indicate a significant positive correlation or a significant negative correlation, but the findings of R^2 =.000 for the second hypothesis statistically concluded that there was no relationship between the percentage recycled, reused and/or composted offset by the overall waste sent to the landfill and the individual social media variables as displayed in table 6.13, Therefore, the second hypothesis was rejected.

Table 6.13 Excluded Variables for Hypothesis Two—There is a Relationship Between Social Media and the Percentage Recycled, Reused and/or Composted

Model		Beta In	t	Sig.
19	Twitter (Participation)	.083[t]	.586	.561
	TA_Rating	.022[t]	.155	.877
	FourSquare (Presence)	.035[t]	.243	.809
	YouTube (Presence)	-.036[t]	-.255	.800
	FB_Talking_About	.072[t]	.506	.615
	TA_Reviews	-.079[t]	-.557	.580
	FourSquare_Score	-.049[t]	-.341	.734
	FB_Likes	.001[t]	.004	.997
	Twitter_Followers	-.204[t]	-1.459	.151
	Flickr (Presence)	.036[t]	.249	.804
	Social Media Staff	.014[t]	.098	.922
	Pinterest (Presence)	.091[t]	.637	.527
	Total Number of Social Media Sites (Out of 7)	-.067[t]	-.472	.639
	YouTube_Videos	-.037[t]	-.262	.795
	Number_of_Tweets	-.232[t]	-1.666	.102
	Facebook (Participation)	-.064[t]	-.447	.657
	FourSquare_Total_Visits	-.144[t]	-1.021	.312
	FB_Checkins	.005[t]	.038	.970
	Twitter_Following	-.232[t]	-1.667	.102

6.3.3.3 Hypothesis 3: There is a Relationship Between Social Media and the Cost of Water

There is a relationship between social media and the cost of all water per guest room

Multiple regression analyses were conducted to determine if the cost of all water per guest room was related to a property's social media participation. The overall regression model was found to be statistically significant with $F(18,32) = 2.177$, $p <$

.027, R^2 =.550. As a group, the study's social media variables demonstrated significant association with the cost of all water per guest room when collectively reviewed in the ANOVA and model summary tables. When the independent variables were reviewed individually in the coefficient table, three variables did comply with the significance level. The social media variables include: *Total Number of Social Media Staff* (B= 73.877, p < .033), *Twitter-Following* (B=-.591, p < .038) and *Twitter-Followers* (B=.363, p < .013).

The independent variables were individually reviewed in the coefficient table, which was compiled through backward regression analysis. During this process, R^2 went through the following transformation in the change of variance (.550, .550, .550, .549, .549, .547, .545, .534, .528, .521, .512, .506, 492, .476). It took 14 models to develop the strongest model that achieved an overall p < .000. Such a value demonstrated that there was a 100 percent chance the probability of correlation in the model will occur by chance. The repeated process exposed the final collective model in response to the third hypothesis:

$$F(5,45) = 8.167, p < .000, R^2 = .476$$

The R^2 result of .476 illustrated that 47 percent of the total variance in the cost of water used per guest room was explained using the social media set in table 6.14. The final model from the third hypothesis contains only the independent variables that demonstrated a statistically significant connection, which increased from three variables to a total of five variables.

Table 6.14 Final Variables for Hypothesis Three—There is a Relationship Between Social Media and the Cost of Water

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
14	(Constant)	-64.438	114.664		-.562	.577
	Social Media Staff	50.582	26.024	.233	1.944	.050
	Twitter_Following	-.576	.194	-.614	-2.965	.005
	Twitter_Followers	.252	.097	.562	2.615	.012
	FB_Checkins	.006	.003	.297	2.098	.042
	FourSquare_Score	29.623	14.128	.256	2.097	.042

After 14 regression models, five independent variables were found to posses significance. *Total Number of Social Media Staff* (B= 50.582, p < .050), *FourSquare-Score* (B= 29.623, p < .042), *Twitter-Followers* (B=.252, p < .012) and *Facebook-Check-ins* (B=.006, p < .042) were significantly and positively associated. Whereas *Twitter-Following* (B=-.576, p < .005) was statistically significant, but negatively associated. Therefore, the third hypothesis was supported by five independent variables. The analysis also concluded that the following variables did not show significant probability in its association with the cost of all water per guest room in the relation to a property's social media participation and were therefore not included in the final model:

Table 6.15 Excluded Variables for Hypothesis Three—There is a Relationship Between Social Media and the Cost of Water

Model		Beta In	t	Sig.
14	Twitter (Participation)	.249[o]	1.677	.101
	YouTube_Videos	-.141[o]	-1.119	.269
	TA_Reviews	-.044[o]	-.260	.796
	Number_of_Tweets	-.154[o]	-.740	.463
	FB_Talking_About	-.144[o]	-.609	.546
	TA_Rating	.096[o]	.823	.415
	YouTube (Presence)	.045[o]	.364	.718
	FourSquare (Presence)	.027[o]	.180	.858
	Pinterest (Presence)	-.045[o]	-.352	.726
	Facebook (Participation)	-.024[o]	-.209	.835
	Flickr (Presence)	-.039[o]	-.350	.728
	Total Number of Social Media Sites (Out of 7)	-.170[o]	-.828	.412
	FB_Likes	-.238[o]	-1.096	.279
	FourSquare_Total_Visits	-.205[o]	-1.184	.243

6.3.3.4 Hypothesis 4: There is a Relationship Between Social Media and the Cost of Waste

There is a relationship between social media and the cost of all waste per guest room

Multiple regression analyses were conducted to determine if the cost of all waste per guest room was related to a property's social media participation. The overall regression model for the fourth hypothesis was found to be statistically not significant with $F(18,32) = .817$, $p < .669$, $R^2 = .315$. As a group, the study's social media variables demonstrated no significant association with the cost of all waste disposal when calculated per guest room when collectively reviewed in the ANOVA and model summary tables. In addition, none of the independent variables demonstrated

statistical significance. Yet, despite no significance, backward regression was employed and after 17 models two independent variables emerged. Multiple regression analysis revealed that *Twitter-Following* (B= -.062, p < .050) and *Twitter-Followers* (B=.036, p < .034) are significantly associated with the cost of waste disposal. Yet, *Twitter-Following* displayed a negative relationship, while *Twitter-Followers* exhibited a positive relationship. During the regression analysis, R^2 went through the following transformation (.315, .315, .315, .313, .312, .310, .307, .306, .298, .290, .273, .256, .236, .215, .194, .177, .124) and in the end achieved an overall p < .042. The repeated process exposed the final collective model in response to hypothesis four:

$$F(2,48) = 3.396, p < .042, R^2 = .124$$

The R^2 result of .124 illustrates that only 12 percent of the total variance in the cost of waste can be explained using the social media set in table 6.16. The final model contains only the independent variables that demonstrated a statistically significant connection to the cost of waste, which increased from no significant variables to a total of two variables.

Table 6.16 Final Variables for Hypothesis Four—There is a Relationship Between Social Media and the Cost of Waste

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
17	(Constant)	98.807	13.824		7.147	.000
	Twitter_Following	-.124	.055	-.571	-2.273	.028
	Twitter_Followers	.068	.026	.654	2.602	.012

The findings for the fourth hypothesis denoted that *Twitter-Followers* (B=.068, p <.012) is significantly and positively associated with the cost of waste disposal when calculated per guest room. Whereas *Twitter-Following* (B= -.124, p <.028) is significantly related, but it demonstrated a negative relationship. Therefore, the fourth hypothesis was supported by two independent variables. The analysis also concluded that the following variables did not show significant probability in their association

with the cost of all waste per guest room in the relation to a property's social media participation and were therefore not included in the final model:

Table 6.17 Excluded Variables for Hypothesis Four—There is a Relationship Between Social Media and the Cost of Waste

Model		Beta In	t	Sig.
17	Twitter (Participation)	.185[r]	1.012	.317
	FB_Talking_About	-.103[r]	-.659	.513
	FB_Checkins	-.105[r]	-.636	.528
	Social Media Staff	.011[r]	.072	.943
	FourSquare (Presence)	-.114[r]	-.821	.416
	TA_Reviews	-.022[r]	-.126	.900
	Total Number of Social Media Sites (Out of 7)	.266[r]	1.527	.134
	YouTube (Presence)	-.162[r]	-1.195	.238
	Pinterest (Presence)	-.176[r]	-1.269	.211
	Number_of_Tweets	.272[r]	1.075	.288
	Flickr (Presence)	-.181[r]	-1.323	.192
	FourSquare_Total_Visits	-.024[r]	-.143	.887
	Facebook (Participation)	-.074[r]	-.528	.600
	YouTube_Videos	.033[r]	.223	.824
	FB_Likes	-.052[r]	-.290	.773
	TA_Rating	.062[r]	.449	.656
	FourSquare_Score	.248[r]	1.741	.088

6.3.3.5 Hypothesis 5: There is a Relationship Between Social Media and the Cost of Energy

There is a relationship between social media and the cost of all energy per guest room

Multiple regression analyses were conducted to determine if the cost of all energy per guest room was related to a property's social media participation. The overall regression model for the fifth hypothesis was found to be statistically significant with

F(18,32) = 1.651, p <.105, R^2 =.482. As a group, the study's social media variables demonstrated no significant association with the cost of all energy used when calculated per guest room when collectively reviewed in the ANOVA and model summary tables. In addition, none of the independent variables demonstrated statistical significance. Despite no variables that demonstrated significance, backward regression was employed and after 17 models two independent variables emerged. Multiple regression analysis revealed that *Twitter -Followers* (B=.391, p < .037) and *Facebook-Check-ins* (B= -.024, p < .004) are significantly associated with the cost of energy use. During the regression analysis, R^2 went through the following transformation (.482, .481, .481, .480, .479, .479, .477, .475, .471, .467, .461, .457, .445, .434, .420, .410, .381) and in the end achieved a an overall p < .000. The repeated process exposed the final collective model in response to research question 5b:

$$F(2,48) = 14.801, p < .000, R^2 = .381$$

The R^2 result of .381 illustrated that 38 percent of the total variance in the cost of energy used per guest room can be explained using the social media set in table 6.18. The final model for hypothesis five contains only the independent variables that demonstrated a statistically significant connection, which increased from no variables to a total of two variables.

Table 6.18 Final Variables for Hypothesis Five—There is a Relationship Between Social Media and the Cost of Energy

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
17	(Constant)	983.739	159.553		6.166	.000
	No_Outliers_ Twitter_Followers	.391	.183	.291	2.140	.037
	No_Outliers_FB_ Checkins	.024	.008	.407	2.992	.004

After 17 regression models, two independent variables were found to posses significance. *Twitter-Followers* (B=.391, p < .037) and *Facebook-Check-ins* (B=.024,

p < .004) were significantly and positively associated. Therefore, the fifth hypothesis was supported by two independent variables. The analysis also concluded that the following variables did not show significant probability in its association with the cost of all energy per guest room in the relation to a property's social media participation and were therefore not included in the final model:

Table 6.19 Excluded Variables for Hypothesis Five—There is a Relationship Between Social Media and the Cost of Energy

Model		Beta In	t	Sig.
17	Twitter (Participation)	.153[r]	.979	.332
	YouTube_Videos	-.113[r]	-.883	.382
	TA_Reviews	-.052[r]	-.302	.764
	YouTube (Presence)	-.043[r]	-.362	.719
	TA_Rating	-.037[r]	-.321	.750
	Pinterest (Presence)	-.050[r]	-.418	.678
	Number_of_Tweets	-.103[r]	-.500	.619
	FB_Talking_About	-.237[r]	-1.032	.307
	FourSquare (Presence)	-.082[r]	-.696	.490
	Flickr (Presence)	-.047[r]	-.397	.693
	Facebook (Participation)	-.061[r]	-.517	.608
	Total Number of Social Media Sites (Out of 7)	.072[r]	.453	.653
	FourSquare_Score	.165[r]	1.301	.200
	Social Media Staff	.074[r]	.587	.560
	FB_Likes	-.109[r]	-.574	.569
	Twitter_Following	-.159[r]	-.736	.465
	FourSquare_Total_Visits	.254[r]	1.517	.136

6.3.3.6 Hypothesis 6: There is a Positive Relationship Between Environmental Performance and RevPAR

There is a positive relationship between the environmental performance of a hotel (water, waste, energy and percentage recycled) and RevPAR

Multiple regression analyses were conducted to determine if the value of RevPAR was related to a property's environmental performance. The overall regression model for the sixth hypothesis was statistically significant with $F(4,47) = 6.731$, $p < .000$, $R^2 = .364$. As a group, the study's environmental performance variables (percentage recycled, reused and/or composted compared to overall waste; cost of all water per guest room; cost of all waste; cost of all energy per guest room) demonstrated a significant association with RevPAR when collectively reviewed in the ANOVA and model summary tables, yet the R^2 result illustrated that only 36 percent of the total variance in RevPAR can be explained using the environmental performance variables. The cost of water per guest room displayed statistical significance of $p < .022$.

Four models of backward regression analysis revealed the following transformation in the change of variance (.364, .364, .363, .351) with a statistical significance level of $p < .000$. Such a value demonstrated that there was a 100 percent chance the probability of correlation will occur by chance. The repeated process exposed the final collective model in response to the sixth hypothesis:

$$F(1,50) = 26.987, p < .000, R^2 = .351$$

The R^2 result of .351 illustrated that 35 percent of the total variance in the study's environmental performance variables (percentage recycled, reused and/or composted compared to overall waste; cost of all water per guest room; cost of all waste; cost of all energy per guest room) demonstrated a significant association with RevPAR. The final model from H6 contained only the independent variables that demonstrate a statistically significant connection (included in table 6.20), which retained the same independent variable from the first model to the fourth model.

Table 6.20 Final Variables for Hypothesis Six—There is a Positive Relationship Between environmental performance and RevPAR

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
4	(Constant)	79.892	13.275		6.018	.000
	No_Outliers_ Cost_of_Water_per_room	.133	.026	.592	5.195	.000

After four regression models, one independent variable was found to posses significance. *Cost of Water per Number of Guest Rooms* (B=.133, p < .000) was significantly and positively associated. Therefore, the sixth hypothesis was supported by one independent variable. The analysis also concluded that the following variables did not show significant probability in its association and were therefore not included in the final model:

Table 6.21 Excluded Variables for Hypothesis Six—There is a Positive Relationship Between environmental performance and RevPAR

Model		Beta In	t	Sig.
4	Percentage_Recycled	.005[d]	.048	.962
	Cost_of_Waste_per_room	-.065[d]	-.501	.619
	Cost_of_Energy_per_room	.169[d]	.964	.340

6.3.3.7 Summary of Hypotheses Results

Backward regression analysis was employed on the study's six hypotheses, which revealed the following relationships demonstrated statistical significance: (depicted in table 6.22)

1. There is a positive relationship between social media and RevPAR

   Two independent variables demonstrated a positive relationship and supported the first hypothesis, while three independent variables demonstrated a negative relationship and rejected the first hypothesis making the final results mixed, for the first hypothesis.

2. There is a relationship between social media and the percentage recycled, reused and/or composted offset by the overall waste

   No variables exhibited statistical significance and therefore the second hypothesis was rejected.

3. There is a relationship between social media and the cost of all water per guest room

   Five independent variables demonstrated a relationship and supported the third hypothesis.

4. There is a relationship between social media and the cost of all waste per guest room

Two independent variables demonstrated a relationship and supported the fourth hypothesis.

5. There is a relationship between social media and the cost of all energy per guest room

Two independent variables demonstrated a relationship and supported the fifth hypothesis.

6. There is a positive relationship between the environmental performance of a hotel (water, waste, energy and percentage recycled) and RevPAR

One independent variable demonstrated a positive relationship and supported the sixth hypothesis.

Table 6.22 Summary of Statistically Significant Hypotheses Results

RevPAR (H1)	**R^2 =.665**		
	+/-	B	Sig.
Twitter (Followers)	+	.063	.000
Facebook (Likes)	+	.014	.000
YouTube (Presence)	-	-71.116	.037
YouTube (Number of Videos)	-	-.043	.028
Total Number of Social Media Sites	-	-32.148	.012
% of Offset Waste (H2)	**R^2 =.000**		
Cost of Water (H3)	**R^2 =.476**		
Social Media Staff	+	50.582	.050
Twitter (Followers)	+	.252	.012
Twitter (Following)	-	-.576	.005
Facebook (Check-ins)	+	.006	.042
FourSquare (Score)	+	29.623	.042
Cost of Waste (H4)	**R^2 =.124**		
Twitter (Followers)	+	.068	.012
Twitter (Following)	-	-.124	.028
Cost of Energy (H5)	**R^2 =.381**		
Twitter (Followers)	+	.391	.037
Facebook (Check-ins)	+	.024	.004
RevPAR (H6)	**R^2 =.351**		
Cost of Water Per Guest Room	+	.133	.000

6.4 Qualitative Phase

Following the outlined research typology in (figure 5.3), the sequential explanatory strategy approached the qualitative inquiry to extract context and meaning related to the study's aim through open-ended responses from the web-based survey, a conversation with an FGLP primary contact and interaction with the FGLP. The adoption of the pragmatic underpinning provided the "freedom" (Creswell 2003, p. 12) to "look to many approaches to collecting and analyzing data rather than subscribing to only one way," (Creswell 2003, p. 12) which allowed for the unexpected inclusion of the administrative dealings with the government-sponsored FGLP (see section 5.9).

In addition to the outlined qualitative data included in the study, the researcher hoped to conduct follow-up interviews with FGLP officials after a thorough review of the quantitative findings, but this request was declined. Still, the researcher was assured that program officials would still honour any official documents requests in accordance with state regulations.

Yet despite the ongoing struggles, the FGLP continues to draw support from government officials and hoteliers seeking the opportunity to demonstrate their commitment to sustainable conduct. The inconsistency and discrepancy in the current FGLP represent opportunities for ongoing improvement and future research into voluntary eco-certification programs. While the complications in data collection encountered in this study could be the basis for future research, the study instead remained focused on the outlined aim and objectives (section 5.2).

6.4.1 Open-Ended Responses from the Web-Based Survey

The web-based survey collected responses from 52 FGLP primary contacts and while the majority of the data collected was quantitative, 29 open-ended responses (appendix six and section 6.2.3) were submitted in response to these two questions:

- Are there other benefits you feel your hotel receives from the Florida Green Lodging Program, but are not listed above?
- Are there any changes you would recommend to improve the Florida Green Lodging Program?

The responses were manually coded (appendix seven) and found that six had a positive tone, 10 had a negative tone and 13 were neutral. The coding further investigated the three areas of interest named in the study's aim and also categorized the recommend improvements to the FGLP and the accolades for the program. The coded topics include: recommended improvements, marketing/communications, economic/financial and environmental performance. The coding for each survey response was not limited to one topic and therefore provided results that represented one to three topics per response. The analysis discovered:

- Six compliments or accolades about the FGLP,
- 15 recommended improvements,
- 10 comments about the marketing and/or communication support,
- Four comments specifically addressing the FGLP website,
- Four remarks about the environmental performance of the FGLP, and
- Two observations related to economic or financial considerations in relation to the FGLP.

6.4.2 FGLP Hotel Primary Contact Interviews

At the conclusion of the statistical analysis of the FGLP findings, the researcher used the backwards regression results to compile a list of questions to pose to the primary contacts at FGLP properties that offered to take part in interviews (appendix ten). The qualitative protocol was based on Michopoulou and Buhalis (2008) study, which consisted of a study within the hospitality industry that included recorded telephone interviews with participants and content analysis of the semi-structured interviews. The content analysis would be evaluated and compared with study's quantitative results to seek associations of content.

While five primary contacts from FGLP properties offered to participate in interviews when the researcher attempted to arrange said interviews, the interested parties disregarded the interview requests both by email and telephone. A total of four email requests were made between March 10 – April 10, 2015 (appendix eight and nine). After the third email, the researcher placed a telephone call to each individual and left a voicemail for four individuals and spoke with one on March 30, 2015. While none of the four voicemails led to a response, the brief telephone conversation with one of

the survey respondents provided some insight as to the unresponsive nature supporting his desire to not participate further.

> "I really want to help you, but I just don't want to jeopardise our green standing."

Even after the researcher assured him of the precautions in place and the ethical responsibility of academic research, he feared "program leaders" would find out and "strip our hotel's green credential." The researcher empathetically complied with his request, but did ask if he would be willing to answer a question that was solely based on his opinion and was not specific to the FGLP. He willingly agreed and said, "I don't see a problem with that." Evaluating the tone of the conversation, the researcher opted to not request the conversation be recorded, as the researcher felt the respondent would refuse and then in turn not offer a response to the question. Therefore, copious handwritten notes were taken by the researcher to document the conversation and transcribed immediately following the conversation so as to ensure the most accurate record of the dialogue. The conversation compiled from detailed notes went as follows:

> Researcher: "Three benefits that hotel green certification offer are: saving money, saving the environment and marketing opportunities. Do you think these three things have any connection together?"
>
> Primary Contact: "I guess…(long pause)…we use less, so we save money and that's good. And I guess…(long pause)…we tell people that we are environmentally sensitive and that helps in marketing, right?"
>
> Researcher: "Well there is no right or wrong. It's your opinion."
>
> Primary Contact: "Then, I guess I say yes. They are related."
>
> Researcher: "What if I said, social media instead of just marketing?"
>
> Primary Contact: "Well, social media means that stuff doesn't need to be printed, which saves money and trees."
>
> Researcher: "Do you think the environmental effects taken at a hotel, like recycling and conserving water, impact social media? Or maybe social media impacts these efforts?"
>
> Primary Contact: "Hmmm…(long pause)…At first I was going to say no, but maybe there could be something…(long pause)…I think tech-savvy people are more eco-conscious people, or at least they know better, right? So, maybe if we do a better job at bringing in smart, tech-savvy guests to our hotel, we will get better monthly reports. But maybe…(long pause)…if maybe…(long pause)…we told people on Facebook all the good we do and how to affects,

say the turtles, they might be happier to be a good citizen on their next visit, right?"

Researcher: "Very interesting. Do you think this is happening?"

Primary Contact: "I doubt it. Social media is handled by the suits, and facilities handles all the maintenance. Tell me this, when's the last time you saw a maintenance guy in a conference room or a manager fixing a toilet? Two different worlds…two different worlds."

Researcher: "Very interesting. I honestly think you have a very good understanding of how everything works. I thank you very much for chatting with me today. I know you said earlier you were not interested in participating in an interview, will you do me a favour and think about it and let me know if you change your mind?"

Primary Contact: "I really wish I could, but…"

Researcher: "Please don't worry about. I am not trying to pressure you at all. I just think you have such interesting insight. You have already helped me greatly and I really appreciate it."

Primary Contact: "You're welcome. I wish you luck."

Researcher: "Thank you. And please let me know if you change your mind."

Primary Contact: "Will do. Thanks."

The conversation with the primary contact provided a glimpse into the thought process of the FGLP primary contact. That said, the comments provided in the electronic survey (appendix six and seven) and the deeper understanding about the administration of the FGLP (section 5.9 and 6.4) also contributed to the greater understanding of the of the statistical findings explained in section 6.3.3.7.

6.5 Conclusion

The findings and analysis of the primary and secondary data collected in this study provide a foundational understanding about the relationship among environmental performance, economic results and social media presence within the FGLP. While the descriptive findings offered an overview of the certified properties, the regression analysis specifically addressed the aim of the study and determined that 15 statistically significant relationships exist among the named variables. The next chapter further reviews the quantitative results and their connection to the qualitative findings to determine the theoretical and practical implications and contributions of this study.

Chapter Seven

Discussion

7.1 Introduction

An explicit aim and detailed objectives guided this investigation to establish whether there was a relationship among environmental performance, economic results and social media presence that contributed to the competitive advantage of FGLP eco-certified hotels. While chapter six provided the data to support the study's intention, the road to research was beset with contributions and findings that were unrelated to the study's goal, but could be useful for future studies and exhibit the research environment the researcher encountered to determine the aim and objective of this investigation. The reflection from the researcher permits a deeper interpretation of the study's design, process and findings using a retrospective, qualitative lens.

7.2 Researcher Reflection on the Study

The pragmatic collection of research for this study remained focused on achieving the aim and objectives set forth at the inception of the investigation, but along the journey new ideas, issues and complications arose that extended beyond the parameters of the focused research. Creswell (2004) explained that research conducted in a real-life setting tend to gather results that may not apply to the current study, but maybe valuable for future research and provide a greater understanding of the complexities encountered in the current study. The presentation of the researcher's ideas also provide an opportunity to demonstrate that "research is done to explain our world in all its complexity" (Hahn 2015, p. 106), even when the complexity exposes critical concerns about the research population and that may not be congruent with government legislation.

The qualitative evaluation offered by the researcher was organized using the strategic management tool of SWOT analysis (Barney and Hesterly 2012; Dyson and O'Brian 1998). A SWOT (Strengths, Weaknesses, Opportunities, and Threats) "analysis is a research method to analyze a certain status-quo. SWOT analysis, also known as SWOT matrix, has often been used in the field of business and extended to that of natural resource management in order to assess a given decision, project or policy directive in a systematic manner" (Reihanian et al. 2012, p. 225). SWOT analysis

seeks to categorize the strengths and weaknesses of a situation, while also recognising the opportunities and threats. It defines problems the researcher experienced, but pairs these detriments with solutions to capitalize on strengths and opportunities, while managing the weakness and threats.

The SWOT assessment tool was employed in this study to evaluate the accumulated qualitative data in a methodical manner within the discussion chapter. SWOT is a "dynamic process for decision-making and is actually a form of brainstorming in that it looks at future possibilities for the organization through a systematic approach into both positive and negative concerns" (Chermack and Kasshanna 2007, p. 388) with the "purpose of understanding the sources of competitive advantage" (Chermack and Kasshanna 2007, p.384). The researcher valued the similar goal of 'competitive advantage' that both SWOT analysis sought and RBT sought, which was the theoretical foundation of the study (Barney and Hesterly 2012; Barney 1991). The structured SWOT approach identified strategic topics key to the FGLP's current and future performance.

The use of the SWOT assessment framework had been used in similar studies within the hospitality industry (Agrawal 2016; Cerovic et al. 2014; Shieh 2012), within social media and marketing research (Brooks et al. 2014), in studies that investigated sustainability (Cerovic et al. 2014; Shieh 2012; Terrados et al. 2007) and also employed in the theory that underpinned the current study, RBT (Barney and Hesterly 2012; Valentin 2001). While similar SWOT assessments have been conducted, this discussion differentiated itself because it sought to uncover specific findings related to the FGLP and RBT in this mixed-methods study. The data included in tables 7.1 and 7.3 were compiled based on the researcher's experiences and opinions garnered throughout the course of the study. These discoveries contributed to the theoretical and practical recommendations and provided a foundation of understanding for future studies.

While the use of SWOT analysis is widely used by researchers and policy makers (Brooks et al. 2014; Barney and Hesterly 2012; Chermack and Kasshanna 2007), attention has been raised about the lack of priority granted to the lists of items within

the four classification categories utilized in the SWOT analysis table along with the potentially staggering number of combined results that could be produced (Ghazinoory et al. 2007; Valentin 2005). In addition Ghazinoory et al. (2007) proffered that "usually only qualitative examination of environmental factors is considered" (p. 99). The researcher recognized these concerns, but did not deem these cautionary items as hazards to this specific study and therefore proceeded to implement the use of SWOT analysis.

7.2.1 Florida Green Lodging Program

The FGLP, which publicly claimed to endorse 711 (FGLP 2014b) eco-certified properties within the state of Florida, was inflicted with inconsistent collection practices for a period of five years (further explained in section 5.9.2). The researcher discovered these inflictions after nearly a year of investigation and while it may have complicated the data collection process, the researcher was able to accomplish the study's aim and objectives. Yet, the problematic encounters provide an interesting qualitative setting that could be insightful for future studies including voluntary, eco-certification programs sponsored by government entities. Table 7.1 offered a SWOT analysis, based solely on the researcher's personal experience and considered the strengths and weaknesses of the FGLP application, the operation of the program, the reporting of annual results and concluded with the recommendations that may capitalize on the opportunities and minimize the threats of the eco-certification program.

Table 7.1 SWOT Analysis of the FGLP

	Strengths	Weaknesses
	--Commitment of the Florida legislature • Receives tax dollars for FGLP operation • Florida statute 286.29 only permits state government employees to use FGLP properties for state business --Commitment of the 81 FGLP properties that completed the application in entirety --The 21-page application collects a great deal of data --Encourages a sustainable vantage	--FGLP applications were not collected consistently from 2010-2014 --FGLP results are not publicly distributed --Application needs updating • Separate potable/non-potable water and room/recreational use • Reduce similar questions • Reduce length of application • Add questions that maybe consistent with other state programs or trade groups

	point in hotel operations --FGLP graphic logo available for use	--FGLP properties receive little to no communication from the program --FGLP website and property list was not updated for consumer use --(Specific to this study) Unwillingness to communicate with the researcher and reluctant to share data
Opportunities	**Opportunities-Strength Strategies** *Use strengths to take advantage of opportunities*	**Opportunities-Weakness Strategies** *Overcome weaknesses to take advantage of opportunities*
--Florida has 4,689 hotels --Has the potential to impact Florida's 93.7 million visitors --Strong public/private partnership to promote tourism to the state of Florida (domestic and international) --Better use the FGLP logo	--Expansion of the FGLP to more Florida hotels could be encouraged via tactics from the legislature --FGLP logo could be used to attract more certified properties and the state tourists in other state tourism public relations campaigns	--In order to attract more eco-certified properties to the FGLP and visitors to FGLP properties, the FGLP must: • Administer FGLP according to regulations • Share annual findings • Make the application process easier/faster • Provide ongoing support to FGLP properties • Seek feedback from properties and tourists • Include the FGLP logo in other state public relations campaigns --Recognize that academic researchers can offer beneficial insight from a different perspective that government agencies may not.
Threats	**Threat-Strength Strategies** *Use strengths to reduce threats*	**Threat-Weakness Strategies** *Cut weaknesses and reduce threats*
--Public recognizing the FGLP is not following its own guidelines --Florida legislature could reduce/remove funding --Another eco-certification program could take the place of the FGLP	--The Florida legislature could require additional oversight for the FGLP and consistent release of data to public --A public relations campaign could occur to attract additional hotels to the FGLP using the current 81 properties and the FGLP logo in the campaign --Share the application data with other entities (trade, academic, government) so the information finds ongoing uses --Partner with another eco-certification program to strengthen and expand FGLP	--Improperly administering the FGLP makes the threats imminent --Corrections to the administration and the application could provide the grounds to maintain the FGLP under greater supervision. --Not communicating with an academic researcher only provides the grounds to share the mismanagement of the FGLP and encourage greater oversight in the future

While the researcher discovered multiple challenges that faced the FGLP, many strengths were also revealed as depicted in table 7.1. The government-sponsored, eco-certification program benefited from the continual support of the elected Florida legislature and the faithful hotels that continued to abide by the FGLP regulations despite the fact the officials operating the FGLP provided little to no support and/or communication. The researcher concurred with previous studies (Honey 2002) that these two groups of individuals remain the most critical for the ongoing success of an eco-certification program. The legislature is the funding source and the hotels determine if the program is employed across the region. That said, the officials overseeing the day-to-day operations of the FGLP hold great responsibility, but the legislative body hold a greater responsibility because ultimately they could appoint new FGLP officials, require added regulations or even terminate the program's funding. This legislative power should be considered both a strength and an opportunity to steer the program to future successes, while holding the responsibility to take necessary corrective action to benefit both the environment and the tourism industry within the state.

The 81 committed FGLP hotels included in this study have demonstrated a strong dedication to the environmental efforts requested by the FGLP. Even when the program increased the length of the application from 3-pages to 24-pages (appendix two), these properties complied and individually provided 277 pieces of datum on each application, even without the responsive administrative support from FGLP officials. The commitment did not stop with the FGLP application, 63 percent of the primary contacts from these eco-certified hotels also opted to participate in the online survey distributed by the researcher.

The data provided in the FGLP application from each of the certified properties hold vast possibilities for other entities, which could include trade organizations, government agencies and academic researchers. The potential of useful findings from the submitted applications could extend beyond research involving eco-certification programs at hotels. The results contain detailed insight related to utility consumption

habits that could influence building standards, engineering behaviour and employment descriptions. Currently the data is submitted via email to the FGLP program and saved as PDFs. The documents are housed on a government computer, but not disbursed to other entities. The unshared data is an unexploited strength of the FGLP and could provide an opportunity for greater research possibilities.

Beyond the human element of the strengths the FGLP posses, the FGLP logo is an untapped resource that in the researcher's opinion is underutilized. The graphic logo (figure 2.4) is a marketing instrument (Gross et al. 2014) that should be visual both at the certified properties and in public relations campaigns of the property and of the tourism efforts for the state of Florida. The FGLP application does not recommend nor does it ask if the logo is displayed or used in marketing efforts for each eco-certified property. And, while not the primary concern of this study, the researcher's investigation of the use of the FGLP logo revealed that it is not used by the state's tourism board, state government agencies, local convention and visitor's bureaus or by that state's hotel and lodging trade association.

From an aesthetic point of view, the FGLP logo has many positive features that translate to an acquiescent marketing situation in visual mediums. The logo can be printed both in greyscale or only utilizing a two-colour processing technique, which makes the printing process an economical decision compared to a typical full-colour method. The colours of green and orange, which are the two colours featured in the logo sit nearly opposite from each other on the colour wheel making them complimentary (Harrington and Mackie 1993). Colour theory and colour preferences theory consider the "implications of using colour psychology across the commercial world to influence people's unconscious responses and purchasing decisions are enormous, and cover packaging, interiors, advertising and promotional material of all kinds" (Page et al. 2012, p. 71). The colour of green has an "association with nature" (Labrecque and Miline 2012, p. 714) and creates a sense of security and a "connection with the outdoors" (Labrecque and Miline 2012, p. 714), which is fitting for an eco-certification. Orange conjures the feelings of excitement and fun (Labrecque and Miline 2012; Hynes 2009), which corresponds well with enticing tourists to visit Florida. Therefore the combination of green and orange provide a colour palate

suitable for a thriving eco-certification program for the hospitality industry. The FGLP should view the graphic logo as a strength and capitalize on its marketing potential.

Unfortunately, much of what the researcher experienced throughout the course of this study could not be categorized as a strength or an opportunity. While section 7.2.1 is an account of the researcher's personal experience, she feels that much of what she experienced was not unique to her. Instead, she was just one of the first individuals to discover the deficiencies outlined in table 7.1 and expressed in a narrative format in the remain portion of this section.

The FGLP presented itself as a flourishing program via its website, which was the only manner to connect with the public. The site claimed between 689-711 (FGLP 2013, 2014) certified properties and when the data from these properties was requested from the FGLP officials, the researcher was forced to wait months and only received a portion of the data from the declared properties (see section 5.9.2). The amount of missing data was significant compared to what the FGLP website stated (depicted in table 7.2). The researcher can understand having a slight variation in the number of certified properties posted on the website and the number of collected applications, but the variation the FGLP maintained for at least five years was anything but insignificant.

Table 7.2 Number of FGLP Properties Declared on the Website vs. Number of Applications Collected, Completed

Year	FGLP Hotels on Website	FGLP Applications Collected	Completed FGLP Applications
2010	689	374	238
2011	689	189	112
2012	689	0	0
2013	711	0	0
2014	711	98	81

Admittedly, the researcher considered the validity of proceeding with the study with the reduced sample size, but concluded that the 81 eco-certified properties within the FGLP provided a similar sample size to the 114 hotels included in the investigation of

the environmental management practices in Spanish hotels (Claver-Cortes et al. 2007) and greater than the 17 properties studied in Hong Kong (Deng and Burrett 2002). The FGLP sample size was also similar to the sample size of the study investigating the social media usage of 67 hotels in Hong Kong (Chan and Guillet 2011). While the sample size was acceptable to proceed with the current study, it still revealed a substantial weakness for the FGLP.

The discrepancy in the numbers might have been recognized sooner if the FGLP regulations required the consistent distribution of the annual findings. The lack of guidance in regard to the use of the data submitted by the eco-certified hotels should be considered a weakness for multiple reasons. Not only would the required release of the FGLP data have revealed the years of mismanagement sooner, it would also provide a greater legitimacy to the program (Blau 1964; Honey 2002), which must now be earned again for the FGLP to be considered successful again in the eyes of patrons. Trust in an organization derives from shared beliefs in a common cause that is supported with a trustworthy communication stream, but the years of neglect and inaccuracies within the FGLP have jeopardized the integrity of the program (further explained in section 8.3).

Following the complications the researcher experienced in receiving the applications from the FGLP, the researcher noticed that 16 of the 17 incomplete applications from 2014 were from the properties operated by the Walt Disney Company. These properties all excluded the specific utility consumption units and costs (appendix two), which were the variables utilized in this study and the only request for specific operational results in the entire 24-page FGLP application. The researcher's request for this missing information or an explanation was ignored both by email and telephone from the FGLP officials. The researcher next requested this missing information directly from the corporate communications office of Walt Disney World. The following are excerpts from the email exchange:

> Excerpt from the Researcher's Email (submitted October 13, 2014)
> "I am examining the official applications submitted by each certified hotel to the Florida Green Lodging Program and unfortunately all 16 of the applications submitted by the Walt Disney World properties excluded a few

responses (listed below), which all other certified properties provided. I am hoping you might be able to provide this insight so this state study is inclusive of the most prominent and environmentally committed lodging facilities in the state."

"While I am working directly with state government officials with the Department of Environmental Protection, who oversee the program, I figure it might be easier to request this information directly from you. Please also rest assured that all identifying details (i.e. names, location, etc) will be treated as confidential and will not be included in any of my reports despite the fact that the Florida Green Lodging Program applications are considered public records."

Excerpt from the Email Response (received October 21, 2014)
"We are very proud that all of the Walt Disney World Resort hotels have received the Florida Department of Environmental Protection's Green Lodging designation and worked directly with the Florida Department of Environmental Protection to provide the required information during the application process. We look forward to our continued inclusion in the designation program which, as you know, is based on a demonstrated commitment to improvement and confirmation of compliance with designation standards which is audited annually by the state. (To learn more about the FDEP Green Lodging Program, please visit the official FDEP Green Lodging web site at www.dep.state.fl.us/greenlodging/)."

"Although at this time we are unable to provide the specific data you requested in your letter, we hope you'll visit www.disney.com/environment for additional information on The Walt Disney Company's commitment to environmental stewardship which as of 2013 included reducing net direct greenhouse gas emissions by 50 percent, decreasing our electricity consumption by more that 10 percent and significantly cutting the amount of refuse our Parks and Resorts send to the landfills – reducing the amount by as must as 90 percent at some major events."

Despite receiving a response that contained no useable data from the missing Disney properties, the researcher was struck by the fact that the respondent claimed to "work directly with the Florida Department of Environmental Protection" and that Disney apparently provided "the required information during the application process." The researcher felt that both of these claims were false, as the FGLP did not demonstrate it worked directly with any of the FGLP properties and Disney clearly did not submit all of the "required information" because the fourth page was omitted from each of Disney's FGLP applications. Two follow-up telephone calls were placed to Disney's Guest Experience Services office and both ended with the researcher leaving a voice

mail just requesting the information from page four from the FGLP for its properties. Curiously, the researcher did not receive a response from Disney, but did receive a telephone call from a member of the FGLP staff reiterating that the FGLP was in the midst of a transition and hoped to have updated information for the Disney properties and for all certified hotels in the coming year (as explained in section 5.9.2). The call from the FGLP did cause the researcher to question by chance had Disney worked directly with the FGLP, but why would Disney be granted permission to submit its applications without operational data? Or were the Disney applications submitted before the FGLP recognized it need to correct its five years of overlooking the certification process of the program? Either way, it was apparent that an exchange of information occurred between an employee of Disney and an official from the FGLP. Sadly, this telephone call was also the moment in which the researcher was told that the FGLP would continue to comply with the Florida statute that requires the release of all public documents (Florida Legislature 2015), but would not be available to answer anymore of the researcher's questions.

Upon reflection, this moment was a pivotal moment in this mixed methods study. It was the moment in which the researcher was still granted access to quantitative data housed in public records but was denied additional qualitative insight directly from the FGLP. Yet, at this point, the researcher still had to distribute the online survey to the 81 FGLP properties, which untimely received a 63 percent participation rate and five primary contacts from the certified hotels who expressed interest in participating in telephone interviews. As explained in section 6.4.2, the interviews never took place because each of the originally interested primary contacts never responded to multiple requests from the researcher.

Despite the lack of qualitative findings provided by FGLP officials and the five primary contacts who expressed interest in follow-up interviews, the researcher would be remiss if her personal qualitative findings were not chronicled in regard to this missing qualitative insight. Was it simply a coincidence that both the FGLP officials and the five interested primary contacts all agreed to share additional insight via follow-up interviews, but later decided not to participate? Or was it a calculated effort? The researcher would have liked to have been optimistic and dismiss the

notion of any collusion, but there were a few factors that caused the researcher to question the outcome. These included:

- The exchange of information that must have occurred between an employee of the Walt Disney Company and an official form the FGLP. This confirmed that conversations between eco-certified hotels and FGLP officials could occur and did occur.
- Why did an official from the FGLP feel the need to specifically tell the researcher that they would not answer any additional forth-coming questions and/or participate in future conversations, unless they pertained to public records?
- Why did five FGLP primary contacts agree to participate in telephone interviews and then simply chose to ignore three emails and one telephone call from the researcher?
- Why did the primary contact from the one FGLP hotel the researcher had a brief conversation with specifically mention that he really wanted to help, "but I just don't want to jeopardise our green standing?"

While all of the preceding thoughts do not directly implicate collusion, they do provide the foundation for the researcher's basis for questioning. Was the persistent questioning from the researcher a cause of concern that the researcher might reveal that the FGLP did not comply with state regulations for at least five years? Could there be ramifications for the FGLP and in turn the Florida Department of Environmental Protection? Could minimizing the potential conversations be a tactic to mask additional concerns? While the researcher has no evidence to specifically answer any of the preceding questions or concerns, she is still left with these instinctive concerns. These unanswered questions combined with the mismanagement of the FGLP for at least five years represent both a weakness and a threat for the FGLP and it provides the justification for continued monitoring of the FGLP in upcoming years for compliance.

Additional weaknesses presented themselves once the researcher reviewed the application questions (appendix two) and responses. The discovery of weaknesses on the application should have been anticipated as the "updated form was not tested" or

"reviewed by another group" (Shearer 2013b), but was instead simply expanded from the previous 3-page application. When the researcher asked how the questions were selected, it was explained that many other programs were "reviewed" that were "not necessarily all lodging related" (Shearer 2013b). So, when asked how did the program plan to use the responses, the researcher was told, "once the forms come in we will decide how and where to use the information" (Shearer 2013b). Upon reflection, the researcher is disappointed that she did not push this line of questioning, but at the time of this interview, it would still be more then a year until the researcher would have the application results from the first 81 FGLP properties to complete the updated 24-page application. The researcher would recommend a stronger line of questioning related to the inception of an eco-certification application and its intended use in future studies.

While the researcher would recommend having an intended use for all quires included on the FGLP application, there were a few areas of concern that arose in this study and that are considered a weakness on the application. These concerns include:

- Similarities in some questions that could benefit from additional clarity to avoid ambiguity or the possibility of deletion of similar questions (section 6.2.1.1).
- The inclusion of a question about the recycling of batteries in which the property can indicate that they do or do not recycle in this category. By simply posing this as a question is problematic because it is unlawful to dispose of batteries in the landfill in Florida under statutes, 403.7192(3) and 403.708(13)(a). What is also troubling is the recycling adoption rate in this category is only 69.1 percent, indicating that either 30.9 percent were not complying with state regulations, the response was answered incorrectly and/or these properties do not utilize any form of batteries. Despite the response, this question raised concerns and should be addressed by program officials (section 6.2.1.2).
- There is only one page on the FGLP application that requests firm specific operational statistics. The quantitative questions require utility consumption volume and/or costs in three categories (solid waste, water and energy). The

energy category permits the division of usage among six energy options, but the water and solid waste categories do not allow for such classification.

- The water category only requests the total number of gallons used annually "for all operations, including irrigation and pool" (FGLP 2012a, p. 4). This query does not allow properties to distinguish between potable or reclaimed water provided via local utilities, water retrieved via underground wells, or water collected on-property via rain barrels and/or water retention ponds. In addition, the raw water consumption data is not paired with property descriptive information to provide context to the volume of water used, which could cause disparity with the addition of property features such swimming pools, golf courses and on-site laundry facilities (Gössling et al. 2012). The water category should be expended to provide more context to the water consumption habits of each property (section 6.2.1.3).
- The solid waste category should consider separating its request for the "volume being reused, recycled or composted" (appendix two) into three divided queries to better understand the waste reduction techniques utilized at each property. Some properties even exceed 100 percent (table 6.2) by recycling, composting and/or reusing more waste then the property disposes of in the landfill. The categorization of the findings will allow researchers to understand the reduction method employed, which may provide the grounds to recommend updates to local municipalities.

The final unfavourable theme the researcher exposed was the lack of communications that should be directed toward three main audiences. The first concern is the lack of two-way communication between FGLP officials and the certified properties. The FGLP website states, "two of the most important parts of any environmental plan are the communication and education components" (FGLP 2014c). Yet, a conversation with a FGLP official revealed this area of the program "was the weakest" (Shearer 2013b). The primary contacts at the eco-certified properties confirmed this communication deficiency in nine comments in the online survey. The second audience that is neglected is the general public that either is or potentially could be a

tourist in the state of Florida. The FGLP should consider partnering with public and private organizations to include the FGLP logo in tourism marketing and public relations campaigns to reinforce Florida's commitment to the environment and encourage sustainable behaviour of its guests. The last audience is the two-way communication that should be fostered among professionals within trade groups, academic institutions and government entities to strengthen the FGLP and ensure that the collected data finds long-lasting uses.

While the FGLP was plagued with considerably more weaknesses and threats compared to strengths and opportunities, the negative elements can be overcome and the researcher is confident the program has a solid foundation to flourish under the right leadership. Successful leadership of the FGLP must acknowledge the previous issues and commit to following the regulations set forth by the Florida legislature in a straightforward and honest manner. Also, the leadership should consider partnering with public and/or private researchers to ensure that the state of Florida and the certified hotels benefit from the ongoing investigations to improve on the program and capitalize on the collected data.

7.2.2 Design and Theoretical Model Used in this Mixed Methods Study

Following data collection and analysis of the study's findings, the researcher utilized the SWOT analysis technique to evaluate both the design of the study and the theoretical model used. The qualitative evaluation of the SWOT analysis, based solely on the researcher's personal experience, should be viewed as providing a foundation for similar forthcoming research and the use of RBT in future studies.

Table 7.3 offers a SWOT analysis of the study's design and the selection of RBT as the study's philosophical foundation. The remainder of section 7.2.2 expands on the table's contents and reflects on the study with a retrospective vantage point.

Table 7.3 SWOT Analysis of the Design and Theoretical Model Used in this Mixed-Methods Study

	Strengths	**Weaknesses**
	Quantitative Phase • 22,437 FGLP Application Variables • 1,701 Social Media Variables • 63% Participation Rate in Online Survey • Determined 15 Statistically-Significant Relationships Existed Resource-Based Theory (RBT) • Goal is to Determine what Resources Offer Competitive Advantage	Qualitative Phase • No Interviews with FGLP Primary Contacts • No Concluding Interviews with FGLP Officials
Opportunities	**Opportunities-Strength Strategies** *Use strengths to take advantage of opportunities*	**Opportunities-Weakness Strategies** *Overcome weaknesses to take advantage of opportunities*
--Unused Data from FGLP Application --Increase Qualitative Data Collection --Future Studies on a Similar Topic --Consider the Use of Other Theoretical Models to Achieve Additional Goals	--Consider additional statistical treatments with the unused data to establish relationships between environmental performance, economic results and social media presence. --Future studies and/or more qualitative data would contribute to greater findings. --Future studies should take better advantage of the high participate rate of the survey to seek more qualitative findings. -High survey participation rate demonstrated the desire to seek a competitive advantage. --The large number of quantitative data could be beneficial for achieving further goals set by other theories	--Seek additional opportunities to collect qualitative data (online survey, gatherings/conventions of hoteliers). --Offer FGLP data to future researchers to establish a longitudinal foundation that may develop a greater focus on qualitative results. --The consideration of other theories (i.e. transaction cost economies) to achieve a solely financial based goal seeking only quantitative outcomes.
Threats	**Threat-Strength Strategies** *Use strengths to reduce threats*	**Threat-Weakness Strategies** *Cut weaknesses and reduce threats*
--More Non-Collection Years of the FGLP Applications --Continued Lack of Government Oversight of the FGLP	--15 established statistically significant relationships provide the foundation for quantitative testing in other environments (i.e. states, counties) --Strong survey participation rate indicates hotel commitment, which must be demonstrated to government officials to encourage collection and oversight. --The goal of RBT (competitive	--Demonstrate the lack of commitment to of FGLP program officials to elected officials to increase the need for greater government oversight. --Require the public distribution of annual FGLP application results. --Encourage the collection of qualitative data in future

	advantage) could be used to encourage greater government involvement/commitment with the FGLP	versions of the FGLP application.

The study was designed to capitalize on the strength of using a mixed methods plan to determine if there was a relationship among environmental performance, economic results and social media presence. The methodology established in chapter five, integrated the quantitative and qualitative methods to provide a comprehensive understanding in the sequential explanatory research design (figure 5.2). While the study's design placed greater emphasis on the quantitative data collection and fully expected to receive a greater amount of numerical data for analysis (figure 5.2), the study still did not receive the intended amount of qualitative data for analysis. That said, the limited qualitative data gathered from the online survey and the dialog with the FGLP primary contact were too insightful to disregard. In addition, the researcher felt the blatant disregard to avoid participation in interviews was another element of qualitative insight, after these individuals previously committed to interviews either in the online survey or in conversations.

Two solid strengths were prevalent in this study; the quantitative portion of the study and the study's theoretical underpinning of RBT (table 7.3). The quantitative phase utilized a large data set of 1,434 variables and used multiple statistically treatments (table 6.9) to determine the 15 statistically significant relationships at the $p<0.05$ level within the study, meaning that "95 times out of 100, we can be sure that there is a true or significant correlation between the two variables, and there is only a 5 percent chance that the relationship does not truly exist" (Sekaran 2000, p. 402). While correlation does not translate to causation and predict a real-life outcome, it does demonstrate a statistical relationship. Using the resources of the FGLP properties, the researcher was able to establish that, statistically, 15 relationships (table 6.22) contributed to the competitive advantage of these eco-certified properties, which in four relationships produced a positive cost advantage and 11 offered a negative monetary impact.

Upon reflection, the researcher would have ideally desired an outcome that demonstrated a relationship that confirmed a reduced utility consumption would lead to an increased social media presence, but that is not what occurred. The researcher did not model the study to institute a predetermined finding. Instead she depended on the guidance of previous studies (section 6.3) and the use of statistical methods to conclude if any relationships existed among environmental performance, economic results and social media presence. That said, if no relationships were found, the study would have still achieved the quantitative elements of the study's aim and objectives.

The second strength of the study was the selection and employment of the study's theoretical underpinning of RBT. While, chapter four outlined a selection of theories that have been previously used to connect the topics of sustainability and marketing, RBT was selected at the onset of the study and the researcher still felt it was the strongest theory to achieve the aim of the research at the conclusion of the study. RBT emphasised the connection between a firm's internal resources and the firm's ability to achieve a competitive advantage. The design of the study was developed to envelop the characteristics of RBT in the data collected from the FGLP applications, social media websites and the questions posed in the online survey. The quantitative results provided statistical proof of the connection between these two intentions making it a strong fit for the study, which confirmed the previous evidence that linked "positive complementary and synergistic effects of matching marketing resources with other firm resources and capabilities" (Kozlenkova et al. 2014, p. 12). This made RBT a fitting lens to determine the connection between marketing and sustainability.

At the conclusion of the study, the researcher reflected on the use of RBT as the theoretical guide of the mixed-methods investigation and considered how the study would have concluded under the theoretical guidance of another theory. While the researcher confidently defends the implementation of RBT as appropriately suited to achieve this study's aim and objectives, alternative theories could have been employed using the same research population to ascertain a different aim, as the population was brimming with interesting data. Specifically, the researcher considered two theories that could have been used with the FGLP population and the

social media presence of these eco-certified hotels; transaction cost economics and institutional theory. Transaction cost economics would have been a fitting theory for this study if the researcher had been solely focused on the quantitative results and selected to ignore qualitative variables. It would have provided the platform to consider the cost benefit analysis of a firm's commitment to its social media presence. If the researcher had perused this theoretical underpinning, the FGLP application would not have provided any insight and the line of questioning in the online survey would have included specific questions related to costs associated with supporting social media efforts at each property. An alternative use for the theory could have offered a cost benefit analysis of the utility costs of the eco-certified FGLP hotels with non-certified hotels in the state of Florida. Although the utility costs of non-certified hotels are not publicly collected and gathering such annual data is not conducted by hospitality trade groups (Rey 2012) and the researcher was told by the Florida Hotel and Restaurant Association that it would be "highly unlikely" (Rey 2012) that Florida hotels would share such insight because "it might be considered to be corporate confidential" (Rey 2012).

The other alternative theoretical model the researcher pondered was institutional theory. Institutional theory could have utilized the data collected on the FGLP application and the social media presence of the properties, but would have sought to establish competitive parity among the eco-certified hotels. The theory encourages firms to mimic the actions of successful firms by "conforming to institutional pressures prevailing in the environment" (Connelly et al. 2011, p. 88). While this might be an interesting outcome, since the FGLP had not yet established what a successful hotel looks like, there would be no baseline to establish what is or is not successful. Therefore, the study outcome would only conclude what the strongest of the research population was, which may or may not reveal the competitive characteristics that other properties should strive to attain.

While both transaction cost economics and institutional theory could have provided the theoretical underpinning using the same research population, the aim and objectives would have been distinctly different and would have needed to be instated at the onset of the study to ensure the aim and objectives were reached. And while the

researcher recognized that these two theories, as well as many others could have been utilized, the study's conclusion would not have achieved the original aim set by the researcher and guided by RBT:

> To investigate whether there is a relationship among environmental performance, economic results and social media presence that contributes to the competitive advantage of Florida Green Lodging Program (FGLP) eco-certified hotels.

RBT guided the study's aim and objectives, the study's design and the study's outcome. Although the researcher would have preferred to have additional qualitative findings to add greater depth and context to the quantitative fiscal findings, the study's findings did accomplish the predetermined aim and objectives. Yet even at this study's conclusion, the "Opportunities-Strengths Strategies" box in table 7.3 reveals the prospect for additional research opportunities to further expand the qualitative findings under RBT, utilize other aspects of the collected FGLP statistics, or even replicate the same study in an alternative environment to further extend the statistical relationships found in this study.

The weaknesses of the study both fall under the qualitative phase of the research as depicted in table 7.3. As addressed in section 7.2.1, interviews with both the primary contact at five FGLP properties and with FGLP officials were disregarded despite the fact that all parties had previously agreed to participate in such conversations. If the researcher had known these qualitative moments would not have taken place, she would have adjusted the research design to collect additional qualitative data via the online survey and/or sought an alternative environment to collect information from FGLP properties and would have extended the early conversations with FGLP officials. Alas, hindsight is a retrospective lens to appraise the situation and adjust for future studies, but it cannot correct the current circumstance. That said, the unwillingness of the individuals to participate in the interview process provided another layer of qualitative insight. Why would these individuals agree to participate and then change their minds? What was the motive? Was their specific information that individuals wanted to conceal? Was it a calculated and coordinated effort or was it simply a coincidence? While the researcher does not have any data to confirm her

opinion, she believes the officials of the FGLP did not want to call additional attention to the fact the government-sponsored program had multiple years of not complying with the legislation and still continued to receive the tax dollars to operate the program. These feelings are based on the fact that the FGLP officials were reluctant to respond to the researcher after revealing the many years of missing data and explaining that they did not have plans to correct the situation. Could the FGLP officials have communicated with the primary contacts and requested that they not participate in the study or was this a coincidence? This unexpected outcome, although divergent from the study's aim and objectives, provides an interesting subject matter for future studies. Future studies investigating eco-certification programs should consider adopting qualitative strategies that value confidential collection of data from sources, which may have prevented the unwillingness to participate in the qualitative portions of the current study.

7.3 Researcher Reflection on the Relationships Among Environmental Performance, Economic Results and Social Media Presence

The aim and objectives of this mixed methods study placed a greater emphasis on the quantitative relationships (figure 5.2) calculated via statistical treatments, but the investigation into relational findings were also considered from a qualitative perspective. Sections 7.3.1-7.3.3 reflected on the discovery of relationships between the three items outlined in the aim and organized in the three phases of the study. These three data-generating segments of data-collection, statistical analysis and follow-up dialog provided the structure for the researcher to consider if a relationship existed among environmental performance, economic results and social media presence. These sections continued the researcher's reflection, but were solely focused on the relationships, not the extenuating circumstances chronicled in sections 7.2.1 and 7.2.2. Prominence was placed on the qualitative findings in the coming sections, but the quantitative relationships were used to demonstrate how the statistical findings would transfer and impact each FGLP property. These statistical implications were evaluated in a practical manner considering the fiscal impact on a single certified hotel to identify a specific action that provided a competitive advantage or disadvantage, which is the intent of RBT.

The exploration of relational findings in this study only demonstrates a correlation between variables and do not imply causation to any of the findings. The relationships outlined do not predict or produce a specific outcome. Instead, the findings computed via multiple regression analysis revealed that the particular variables are statistically related. "Correlations do not establish causes. Causes are 'mechanisms' which produce outcomes. We can have a correlation where there is no conceivable mechanism" (Manicas 2006, p. 151). Future research may determine the causation between the three items in the study's aim. This study first had to determine if a relationship existed and then if any particular relationship contributed to the competitive advantage within the FGLP.

7.3.1 Data-Collection

The study's exploration into the possible relationships initially began with an examination of the FGLP application (FGLP 2012a), which revealed no relationship among the three areas of investigation because inquiry only requested operational practices and outcomes from the property's utilities. The government form did not request overall economic results or the social media participation of the hotel. The absence of such requests sits in contrast to claims on the FGLP website that profess the eco-certification not only benefits the environment through conservation and efficiency practices, but it also "helps designated properties save money and increase occupancy rates. By reducing water and energy use and reducing waste generation operating costs go down" (FGLP 2013). Yet, the FGLP does not collect data from its certified properties to confirm this claim or to quantify the results. Future FGLP application updates should include queries to support the claims of saving money and increasing occupancy rates, or the claims should be removed from the FGLP website.

Marketing assistance is a feature that the FGLP website claims to offer eco-certified properties. Yet, the FGLP application did not include the word 'marketing' or make mention of the use of the eco-label, despite the fact that one of the benefits of an eco-certification is its use as a "meaningful marketing tool" (Gross et al. 2014, p. 166). In fact, the traditional marketing tools provided by the program (FGLP 2014a) do not address the 80 percent of travellers that use the Internet as their travel planning source or the 61 percent who use the Internet as inspiration for upcoming travel (Google

2013). Therefore, by not embracing online marketing opportunities, or even acknowledging these opportunities, certified properties might not be taking full advantage of the marketing attributes that come along with an eco-certification (Anderson 2012) because of the lack of marketing tools and/or guidance offered by the FGLP.

The absence of these results is also of particular interest because the FGLP application had been updated from a three-page document (FGLP 2012b) to a 24-page document (FGLP 2012a) and yet the extra 21 pages did not address the balance between environmental, economic and marketing rewards that the FGLP website claims (FGLP 2013). The researcher concluded that these absent items should be considered as oversight for the eco-certification program and would recommend the inclusion of these areas in future updates of the application. The added data may provide the FGLP the ability to substantiate not only its environmental claims, but also its economic and marketing claims. In addition, the marketing tools and advice offered by the FGLP should be enhanced to include the Internet audience and eWOM marketing campaigns.

A balance must be struck between marketing efforts to attract customers that contribute to economic prosperity while still protecting the wellbeing of the environment to ensure the long-term viability of the tourist destination. These challenges force firms to creatively utilize, bundle and promote resources and capabilities in order to achieve a competitive advantage (Barney et al. 2001; Barney and Hesterly 2012; Kozlenkova et al. 2014).

7.3.2 Statistical Analysis

The connection between the study's underpinning resource-based theory and the statistical findings outlined in section 6.3.3.7 is determining if a competitive advantage is achieved. The six hypotheses revealed that 15 statistically significant relationships do exist in the study's variables via regression analysis. Yet, only four of these relationships make a positive fiscal contribution to an eco-certified property (table 7.4), while the remaining eleven relationships lead to a monetary loss (table 7. 5).

The researcher used the quantitative findings to examine the combination of resources that a FGLP hotel should statistically employ to achieve competitive advantage or understand what combination of resources caused a disadvantage and what the impact would look like at a single eco-certified hotel. Section 7.3.2 is the practical application of RBT at a FGLP property.

Table 7.4 Monetary Gain Per Room Annually for Statistically Significant Relationships

RevPAR	**H1**
Twitter (Followers)	$0.063
Facebook (Likes)	$0.014
Cost of Water	**H3**
Twitter (Following)	$0.576
Cost of Waste	**H4**
Twitter (Following)	$0.124

Table 7. 5 Monetary Loss Per Room Annually for Statistically Significant Relationships

RevPAR	**H1**
YouTube (Presence)	$71.116
YouTube (Number of Videos)	$0.043
Total Number of Social Media Sites	$32.148
Cost of Water	**H3**
Social Media Staff	$50.582
Twitter (Followers)	$0.252
Facebook (Check-ins)	$0.006
FourSquare (Score)	$29.623
Cost of Waste	**H4**
Twitter (Followers)	$0.068
Cost of Energy	**H5**
Twitter (Followers)	$0.391
Facebook (Check-ins)	$0.024
RevPAR	H6
Cost of Water Per Guest Room	$0.867

In four of the five analyses that involved social media, the number of Twitter followers of a certified hotel emerged as a statistically significant variable, which was the variable with the most correlated relationships. In each of these instances,

regression analysis revealed positive correlation to the named variable in the first, third, fourth and fifth hypotheses. The positive nature of the findings remained fiscally positive in practice too for the first hypothesis, which found that every Twitter follower accounted for the contribution of .06 cents to the RevPAR of a FGLP property demonstrating correlation between the variables. Unfortunately, the positive correlated findings for the remaining Twitter followers variable were found to be a drain and in fact increased the expenditure of a property because the dependent variable in each of these hypotheses was the cost of a utility at a property. The analysis found that each Twitter follower increased the cost of water by .25 cents per room annually, cost of waste by .07 cents per room annually and the cost of energy by .39 cents per room annually. Whereas, in contrast, each Twitter account that a certified property followed decreased the cost of both water and waste. The analysis found th1at for every account followed, the FGLP property decreased the cost of water by .58 cents per room annually and the cost of waste by .12 cents per room annually.

Four of the relationships uncovered in the analysis initially revealed greater financial impacts compared to the other findings, but the unit of measurement behind these variables was much smaller making the results appear disproportionate. These relationships include: The dichotomous results of a property's presence on YouTube; the total number of social media sites that each property appeared on, which was limited to a maximum of seven; the number of staff members supporting social media efforts at a property, which was limited to five; and the score presented on FourSquare, which ranged from one to ten.

The remaining social media sites that were found to be correlated within the scope of the six hypotheses were the number of videos posted on YouTube and the number of likes and check-ins on Facebook. The study found that each check-in that a FGLP received on Facebook, increased its cost of energy by .02 cents per room annually and the cost of water by nearly a penny per room annually. The same negative fiscal relationship occurred with the number of videos posted on YouTube, with each video decreasing RevPAR by .04 cents per room annually. In contrast, RevPAR increased

by a penny a room annually for each like on Facebook the eco-certified property received.

The relationship exposed in the sixth hypothesis with the cost of water per guest room correlated to RevPAR initially appeared to have a positive economic impact on an eco-certified hotel as it demonstrated a .13 cent increase in RevPAR. Yet, the .13 cent increase required a full dollar expenditure of water usage per guest room, which was the unit of measure connected to the unstandardized result of the variables. If the b-coefficent of .133 had been correlated just to the revenue received and simply divided by the number of rooms, instead of RevPAR, which takes into account the hotel's occupancy rate, the result for the sixth hypothesis would indicate a loss of .867 per room annually. The .867 loss result would still be accurate if a property operated with an occupancy rate of 100 percent, but a decreasing occupancy rate would in turn, increase the loss. Therefore, the loss included in table 7.5 for the sixth hypothesis will continue to increase with a lower occupancy rate.

While the analysis depicts rather low monetary units for many of the statistically significant relationships (tables 7.4 and 7.5), perspective is important to understanding the full impact these relationships reveal. Table 7.6 depicts the annual economic impact these relationships would have at an eco-certified property based on the FGLP findings and the assumptions outlined under the table. The calculations were conducted using the unstandardized b-coefficient from the analysis, which predicted the rate the dependent variable will increase or decrease in relation to the independent variable (Field 2013). A social media assumption was applied to all but two of the variables to better understand the economic impact a particular number of likes, followers or even score would have on an eco-certified property. The two variables that did not have an assumption placed on them were the cost of water per guest room because of variance of water needs of each property and the dichotomous results found for the presence on YouTube because it only offered two units of measure, yes and no.

Table 7. 6 Projected Annual Monetary Results of the Statistically Significant Relationships

	Monetary Result	Calculation Per Room Annually For Each Social Media Unit	Calculation with the Assumption Value* Annually	Calculation Per Social Media Unit for a 100 Room Property Annually	Calculation with Assumption Value* for a 100 Room Property Annually
RevPAR (H1)					
Twitter (Followers)	Gain	$0.063	$63.00	$6.30	$6,300.00
Facebook (Likes)	Gain	$0.014	$14.00	$1.40	$1,400.00
YouTube (Presence)	Loss	$70.116	-	$7,011.60	-
YouTube (Number of Videos)	Loss	$0.043	$43.00	$4.30	$4,300.00
Total Number of Social Media Sites	Loss	$32.148	$225.036	$3,214.80	$22,503.60
Cost of Water (H3)					
Social Media Staff	Loss	$50.582	$252.91	$5,058.20	$25,291.00
Twitter (Followers)	Loss	$0.252	$252.00	$25.20	$25,200.00
Twitter (Following)	Gain	$0.576	$576.00	$57.60	$57,600.00
Facebook (Check-ins)	Loss	$0.006	$6.00	$0.60	$600.00
FourSquare (Score)	Loss	29.623	$236.984	$2,962.30	$23,698.40
Cost of Waste (H4)					
Twitter (Followers)	Loss	$0.068	$68.00	$6.80	$6,800.00
Twitter (Following)	Gain	$0.124	$124.00	$12.40	$12,400.00
Cost of Energy (H5)					
Twitter (Followers)	Loss	$0.391	$391.00	$39.10	$39,100.00
Facebook (Check-ins)	Loss	$0.024	$24.00	$2.40	$2,400.00
RevPAR (H6)					
Cost of Water Per Guest Room	Loss	$0.867**	-	$86.70**	-

*Assumption Values: 1,000 Twitter (Followers and Following); 1,000 Facebook (Check-ins and Likes); 1,000 YouTube (Number of Videos); 8 FourSquare (Score); 7 Total Number of Social Media Sites; and 5 Social Media Staff.

**The loss will continue to increase as the occupancy rate decreases

Table 7.6 illustrates the positive and negative economic impacts that individual relationships posses, but it also allows for the annual financial prediction of each hypothesis using the same assumption values for a 100 room eco-certified hotel. Only the fourth hypothesis, which sought a relationship between social media and the cost of waste per room, offered a positive economic outcome of a gain of $5,600.00 annually when viewed holistically. The remaining hypotheses predict an economic loss for an eco-certified property with H1 reducing RevPAR by $26,115.20 annually, H3 adding $17,189.40 to the cost of water annually, H5 increasing the cost of energy by $41,500.00 annually, and H6 subtracting at least $86.70 annually from a property's RevPAR.

While the statistically significant relationships remain the focus of this study, the absence of any relationships for the second hypothesis, which sought a connection between the percentage recycled and the social media independent variables, is notable. In addition, no statistically significant relationships emerged from the social media sites of Pinterest, Flickr and TripAdvisor. Although, each FGLP property in the study's sample had a presence on the TripAdvisor website.

7.3.3 Open-Ended Questions and Dialog

The disinclination of FGLP officials and primary contacts to participate in interviews, combined with the collected qualitative findings (sections 6.4.1 and 6.4.2) contributed to the greater understanding of the statistical findings and potential areas of improvement to increase the competitive advantage of environmental performance and economic results at eco-certified hotels.

The open-ended responses from the web-based survey (appendix six and seven), submitted in response to two questions (appendix five) addressed two of the coding categories and the exposed relationships among the qualitative submissions. Four relationships were discovered that consisted of:

- Two comments provided a compliment that was directed toward the environmental performance of the FGLP,
- One respondent recommended an improvement to the environmental performance offered by the FGLP,

- Nine remarks addressed the marketing and communications support offered by the FGLP and recommended improvements, and
- One individual provided an improvement recommendation that both addressed environmental performance and economic outcomes.

Of the relationships revealed in the comments, the nine comments that made a recommended improvement to the marketing and communication support provided by the FGLP were of interest because nine of the 10 comments made about this issue requested a change. In addition, four other responses specifically addressed the FGLP website and necessary updates, which could also be categorized as a communication function of the program. Meaning that nearly half of the comments provided by the primary contacts at FGLP properties focused on one issue; marketing and communications. This relationship discovery reflects the conclusive recommendations of previous studies (Chan and Guillet 2011; Leung et al. 2013) that encouraged the continuous improvement of a hotel's social media efforts to avoid the "ineffective use of company resources," which tend to "undermine the value of social media marketing possibly brought to the firm" (Chan and Guillet 2011, p. 346).

The web-based survey did include one question that may have contributed to the convergence of comments about the marketing and communication issue. The question requested the number of staff members at the FGLP hotel that were "dedicated to social media efforts." After the discovery of 10 open-ended comments about marketing and four additional about the FGLP website, the researcher evaluated the comments and found two of the marketing and communications remarks did include a reference to a specific social media website. This does not infer that the survey question about the number of staff members dedicated to social media efforts influenced the responses or encouraged responses about the topic, but it is something to consider when viewing the large number of responses related to marketing and communications.

Yet, a focus on the improvement of social media efforts by eco-certification officials would address the concern that the "online world is rapidly evolving and some companies may embrace new technologies due to the pressure to 'be digital' but are not thinking about what it means to the business in a virtual environment" (Leung et

al. 2013, p. 18). The FGLP, and other eco-certification programs, have the opportunity to take the lead in not only providing a program that supports "triple bottom line reporting" (Fairweather et al. 2005, p. 82), but also embraces the eco-certification as a "meaningful marketing tool" (Gross et al. 2014, p. 166) and/or "marketing mechanism with which tourism suppliers can differentiate their products" (Deng-Westphal et al. 2015, p. 234) that can be used in an online environment to raise consumer awareness about a firm's commitment to environmental standards. While this study found that social media participation did not provide fiscal benefits in many categories, four relationships did expose a positive economic impact. The four positive relationships match Anderson's (2012) positive findings that proved that a one-point increase in a TripAdvisor score could increase a hotel's price by 11.2 percent. The Anderson (2012) study did not evaluate and/or classify eco-certified properties or take into consideration the utility usage that the current study incorporated, instead it only focused on RevPAR, ADR and occupancy rates. While some of the findings are conflicting between positive and negative, both studies found a relationship between social media presence and economic outcome, confirming "the effect of social media and user generated content on hotel performance has been strengthening" (Anderson 2012, p. 11).

The dialog with the FGLP primary contact (transcript included in section 6.4.2) offered his initial thoughts about the potential relationship among the three items. While the comments were brief, and shrouded in reluctance to participate, the remarks came across as sincere, unbiased and fresh, as if this was the first time he had thought about an eco-certification in such a light.

The primary contact, who was classified under the facilities/engineering job responsibility, concluded that there was a relationship among the subject matters with a general explanation of, "we use less, so we save money and that's good…we tell people that we are environmentally sensitive and that helps in marketing." When asked to expand his explanation and consider how social media might relate to the environmental effects and economic outcomes at an eco-certified property, he initially expressed that he did not see a connection. But, he quickly rebutted his preliminary thoughts and explained, "I think tech-savvy people are more eco-conscious people, or

at least they know better, right? So, maybe if we do a better job at bringing in smart, tech-savvy guests to our hotel, we will get better monthly reports. But maybe…if maybe…we told people on Facebook all the good we do and how to affects, say the turtles, they might be happier to be a good citizen on their next visit, right?"

The uncomplicated responses mirror Porter's (2008) view of how competitive advantage "explores the role of complementary products and service" (p. xvi), which is the underpinning of RBT and this study. His ability to make the qualitative connection among the three items named in the study's aim reinforced the quantitative correlation found earlier in the study. While the rationales connecting environmental performance, economic results and social media differ between the qualitative and quantitative portions of the study; a relationship was established.

The dialog continued and exposed an interesting situation that might be a factor in limiting a relationship among the three items. When asked if such a relationship among environmental performance, economic results and social media was happening at eco-certified hotels, the respondent quickly replied with a coy, "I doubt it." He went on to explain, "Social media is handled by the suits, and facilities handles all the maintenance. Tell me this, when's the last time you saw a maintenance guy in a conference room or a manager fixing a toilet? Two different worlds…two different worlds." The straightforward response is even more interesting when it is compared to the titles of the individuals listed as the primary contact for the FGLP. The study's sample is grouped into eight job-specific categories (appendix two) with 77.8 percent deriving from either property management or facilities/engineering, 40.8 percent from management and 37 percent from facilities/engineering. With the majority of the primary contacts deriving from two nearly equal groups within the FGLP structure and applying the knowledge offered in the qualitative portion of this study of "two different worlds," is it a coincidence that the top two benefits requested in the second question (section 6.2.3) of the web-based survey was regarding two distinctly different topics of economic gain (28.8%) and being featured on the FGLP website (26.9%)? Therefore, does the benefit and/or goal of the FGLP depend on the title of the primary contact? Not wanting to over-infer the "two different worlds" comment, the results of the open-ended responses in the web-based survey also demonstrated

that it does matter what the title is of the primary contact, as all of the 14 responses relating to both marketing/communication and the FGLP website all derive from the individuals within management and not from employees categorized under facilities/engineering. These findings lead the researcher to question if the competitive advantage could be gained for an eco-certified property if the relationships across multiple job functions and in turn, across the three areas of investigation, could be achieved if each of the functions were represented and included in the FGLP certification process. Research has found that "best practice companies minimize hierarchical management processes" and allow "crossfunctional teams that bridge the gap between silos to form a seamless flow of responsibility and communication" (Davis and Eisele 2007, pp. 48-49). Could a stronger relationship among environmental performance, economic results and social media be achieved if a stronger relationship was also established among eco-certified hotel employees who in turn seek to achieve a benefit related to their job responsibility?

7.4 Theoretical and Practical Findings Discovered During the Researcher's Reflection

The study employed the use of an explanatory sequential design, which incorporated the research elements of both quantitative and qualitative approaches in a complementary manner. Following Creswell's (2009) typology and mixed methods planning procedure (figure 5.2), the study prioritized the quantitative data collection and assessment, yet produced outcomes with both numeric and subjective findings. These findings contributed to the theoretical and practical knowledge discovered in the study, while also extending the research of RBT. Unlike the assessment of the quantitative elements of the study, the discussion chapter was not value-free, yet it was bound by the theoretical lens of RBT and the researcher's value system.

The researcher reflected upon the study using two different methods; SWOT analysis (sections 7.2.1-7.2.2) and the contemplation of relational findings between the three items outlined in the aim and organized in the three phases of the study (sections 7.3.1-7.3.3). The pragmatic underpinning of the study permitted these reflective methods (outlined in chapter seven) to place greater emphasis on the discovery of

qualitative relationships, which stood in contrast to the statistical findings (table 6.22) calculated via stepwise multiple regression analysis. The qualitative insight organized in the discussion chapter contributed to the theoretical and practical knowledge generated by the study.

Upon completion of sections 7.2 and 7.3 the researcher reflected upon the findings to discover the common theoretical thread of competitive advantage woven throughout the sections. Achieving a competitive advantage is the goal of RBT and this study discovered factors that demonstrated a strong commitment to achieving competitive advantage as well as the converse, where factors were potentially missing opportunities to achieve competitive advantage. These factors include:

- There was a desire for the FGLP properties to achieve a competitive advantage with the eco-certification program despite the unsupportive nature of the officials overseeing the program. The 81 FGLP hotels included in the study committed to the eco-certification program by completing the newly expanded application, received no administrative and/or marketing support from the state of Florida and stood witness to a stagnate eco-certification website for more than a year. The loyalty of the FGLP primary contacts did not stop with the FGLP application, 63 percent also opted to participate in the online survey distributed by the researcher, further demonstrating a commitment to the ongoing success despite the challenging environment.
- There were unexploited opportunities revealed where the FGLP could capitalize on the strengths and benefits of the eco-certification that may offer a competitive advantage to its member hotels. These include: individual property, program and state tourism board marketing schemes; the addition of more FGLP hotels to the program to expand and disburse the eco-certification marketing brand across the state; an updated website that lists accurate FGLP properties and offers annual certification results; and the chance to submit feedback and/or support from tourists, hoteliers, government officials, and researchers.
- The graphic logo used by the FGLP posed visual elements that could be viewed as a competitive advantage if used in settings to attract environmentally conscious travellers. Using the theoretical lenses of colour theory and colour preferences theory, the FGLP logo colours evoke a connection and purchasing behaviour suitable for a successful tourism eco-label.

The integration of marketing and RBT research directly addresses "the most fundamental challenge at the heart of organizational survival: what gives rise to competitive advantage and how can it be sustained" (Srivastava et al. 2001, p. 777)? This study sought to understand this interaction within eco-certified hotels and the discussion chapter provided the basis for further reflection on the relationship among environmental performance, economic results and social media presence. Prior research found "evidence of the positive complementarily and synergistic effects of matching marketing resources with other firm resources and capabilities" (Kozlenkova et al. 2014, p. 12) and that "resources rarely act alone in creating or sustaining competitive advantage" (Wade and Hulland 2004, p. 123). The quantitative findings revealed statistically significant relationships of $p<0.05$. While the qualitative discoveries of the relationships among the factors are not as simple as the statistical outcomes, they are just as significant.

A FGLP primary contact explained that he felt that there was a relationship that may contribute to a property's competitive advantage among the three subject matters with a general explanation of "we use less, so we save money and that's good…we tell people that we are environmentally sensitive and that helps in marketing." He expanded his thoughts to specifically address social media websites and justified that if "we told people on Facebook all the good we do and how to affects, say the turtles, they might be happier to be a good citizen on their next visit, right?" His uncomplicated responses echoed Porter's (2008) view of how competitive advantage "explores the role of complementary products and service" (p. xvi), which is the underpinning of RBT and this study.

Yet, despite statistical results (section 6.22) and the qualitative thoughts of the FGLP primary contact pointing to the competitive advantage achieved with the factors named in the study's aim (section 6.4.2), the researcher further explored the "conditions that distinguish between resources that do and do not have the potential to generate" (Kozlenkova et al. 2014, p. 11) sustained competitive advantage (SCA). Under the RBT theoretical framework, SCA is only attained when a firm's resources

are valuable, rare, imperfectly imitated and the firm's organization (VRIO) takes full advantage of its resources. Should a firm only achieve 'valuable,' it will only achieve "parity" (Kozlenkova et al. 2014, p. 14) over its competitors. Should the same firm also be classified as attaining a 'rare' resource too, it will then achieve the classification of "temporary advantage" (Kozlenkova et al. 2014, p. 14). And by adding the ability to imperfectly imitate a firm's resource, the firm has the "potential" (Kozlenkova et al. 2014, p. 14) to achieve a SCA, but is just considered a "strong relationship" (Kozlenkova et al. 2014, p. 14) before achieving the full SCA with the complete VRIO.

The researcher evaluated the study's statistically significant relationships that predicted a fiscal correlation within FGLP hotels using the VRIO evaluation framework. Each VRIO assessment was appraised based on the relationship, and not the individual resource. The subjective nature of the VRIO process used the data collected throughout the study, but also depended on the judgment of the researcher. This subjective nature lead the researcher to accompany the study's VRIO decisions (table 7.7) with descriptive explanation supporting the rational behind the assessment framework in the coming paragraph.

Table 7. 7 VRIO Assessment of the Statistically Significant Relationships

	Monetary Result	**V** *Value*	**R** *Rarity*	**I** *Imperfect Imitated*	**O** *Organization*
RevPAR (H1)					
Twitter (Followers)	Gain	X	X	-	-
Facebook (Likes)	Gain	X	-	-	-
YouTube (Presence)	Loss	X	-	-	-
YouTube (Number of Videos)	Loss	X	-	-	-
Total Number of Social Media Sites	Loss	X	-	-	-
Cost of Water (H3)					
Social Media Staff	Loss	X	-	-	-

Twitter (Followers)	Loss	X	X	-	-
Twitter (Following)	Gain	X	X	-	-
Facebook (Check-ins)	Loss	X	-	-	-
FourSquare (Score)	Loss	X	-	-	-
Cost of Waste (H4)					
Twitter (Followers)	Loss	X	X	-	-
Twitter (Following)	Gain	X	X	-	-
Cost of Energy (H5)					
Twitter (Followers)	Loss	X	X	-	-
Facebook (Check-ins)	Loss	X	-	-	-
RevPAR (H6)					
Cost of Water Per Guest Room	Loss	X	-	-	-

All of the statistically significant relationships in this study were deemed to be a valuable resource because they "enable a firm to develop and implement strategies that have the effect of lowering a firm's net costs and/or increase a firm's net revenues beyond what would have been the case" (Barney and Arikan 2001, p. 138). The correlated findings provide statistical data that theoretically would financially impact a FGLP hotel's fiscal results. Even the relationships that revealed a negative impact could be implemented in reverse to generate a positive impact. For example, if a FGLP hotel were to reduce the number of Facebook check-ins, the property would theoretically reduce its cost of water and energy consumption.

The rarity category of the VRIO framework was recognized with all of the relationships that involved the social media website of Twitter. Understanding the social media presence of FGLP properties (table 6.5) determined the rarity within the study. Only 55.6 percent of FGLP hotels have a registered Twitter account, which sits in contrast to the saturation rates for the other sites that range from 75-100 percent making the presence on these sites a more common occurrence. The lagging Twitter participation rates and the six Twitter relationships found in the study lead the researcher to endorse the rarity designation. The three remaining relationships that do

not include the connection with a specific social media site, were not granted the rarity designation because: the cost of water was proportionately disbursed across the properties; the number of staff members supporting the hotel's social media efforts was nearly equally proportioned with 40.4 percent having five or more employees and 44.2 percent with one or two; and 66 percent of FGLP hotels have a presence on at least six social media web sites. The remaining VRIO elements of IO were not granted to any of the relationships because these RBT categories require a longitudinal assessment of the effects over a period of time (Barney and Hesterly 2012; Barney and Arkan 2001) to determine if competitors can imitate the resource. Therefore, the VRIO assessment (table 7.7) and the supporting data in this study should serve as a foundation for future FGLP research to determine SCA. Yet, this study does demonstrate six relationships that exhibit a temporary advantage with the potential to expand to a "strong relationship" (Kozlenkova et al. 2014, p. 14) or SCA with the addition of data in the coming years.

Achieving any level of competitive advantage, be it temporary or sustained, over like firms requires a continued focus "on the firm's own decisions and competencies" (Hart and Dowell 2011, p. 1465) and the ability to "identify the key resources and drivers of performance and value in their organizations" (Cheng et al. 2010, p. 435). Still, even a keen individual focus does not determine when value is achieved, as value is "exogenous" (Srivastava et al. 2001, p. 779) and extended to a firm only when external stakeholders find value in a firm's tangible or intangible resources. This is even more evident when viewing the social media efforts of the FGLP, as marketing is fundamentally externally focused. Throughout this study, the importance of adopting a holistic management approach presented itself at many moments and is salient when considering how to create internal and external value within a FGLP property to achieve a competitive advantage, which is the foundation of RBT.

This study discovered both quantitative and qualitative findings that "build knowledge about sustainability and marketing" (Connelly et al. 2011, p. 87) and offer a foundation for future research (sections 8.2, 8.3 and 8.6), but the researcher considers the understanding about the RBT underpinning of competitive advantage the greatest theoretical and practical contribution. The study statistically demonstrated

that competitive advantage can be achieved via cost leadership, but it was the missing data or the concerns expressed from FGLP primary contacts that provided the strongest findings that would benefit the FGLP's competitive advantage via differentiation. The FGLP and its individual properties should seek to differentiate themselves and ultimately aim to achieve a competitive advantage by adopting a holistic management approach, which would allow it to better recognize and capitalize on its tangible and intangible resources. A holistic approach would benefit the following areas of the FGLP:

- Further investigation into what benefits an eco-certification offers a hotel, from the perspective of different job functions. This is similar to the first question of the study's web-based survey that discovered a lagging reliability score of r =.408, which fell below the acceptable alpha reliability coefficient of r =.70 (Nunnaly 1978).
- The current FGLP application form should be reviewed to ensure the questions properly evaluate the necessary conditions to achieve the government-sponsored standard, but should also consider the inclusion of questions related to marketing. Currently, the application only seeks facility-based questions and overlooks the eco-certification benefit as a "meaningful marketing tool" (Gross et al. 2014, p. 166). In addition, the inclusion of an open-ended question would provide the opportunity for hoteilers to provide comments that may contribute to future competitive advantage.
- The FGLP should commit to regular communication with certified properties and the communication should be directed to multiple staff members that represent distinctly different job functions to ensure widespread acceptance of the eco-certification and shared responsibilities of the program's success.
- The management of FGLP hotels should disburse the responsibility of achieving and maintaining its eco-certification among a group of employees who represent different job functions. This disbursement of responsibility will empower employees to seek opportunities unique to their specific operating environment that may enhance the program while working together as a team (McInerney 2013). In addition, such a collaborative environment provides a general continuity plan for the FGLP despite employment changes and a checks-and-balances system for the program's ongoing success.

- The elected officials of the state of Florida should consider requiring a more holistic approach for the continued operation of the FGLP. This approach would set an expectation that all involved parties would both provide and receive ongoing feedback about the program. The involved parties should include the certified hotels, the FGLP officials and the elected state officials that fund the program. Such a cycle of sharing may have prevented the years of unacceptable operation of the FGLP and the insight holds the possibility to positively impact the program to achieve competitive advantage.

The FGLP and other eco-certification programs should consider including guidance and/or tools that would encourage its properties to operate in a holistic manner. In addition, future research should consider including an inquiry into the holistic nature of the firm in RBT studies.

7.5 Conclusion

The pragmatic underpinning of the study respects that "knowledge claims arise out of actions, situations, and consequences rather than antecedent conditions," (Creswell 2003, p. 11) which allowed the researcher to proceed with this investigation maintaining a focus on the aim and objectives, but not disregarding external factors that could contribute to future studies. The researcher was able to confirm that theoretically and statistically, relationships do exist among environmental performance, economic results and social media, which supports the use of RBT as its investigative foundation. The study's variables confirmed combinations of resources to achieve competitive advantage, but also found areas of weaknesses that could establish detrimental qualities. Using both the quantitative and qualitative findings, the researcher established that a competitive advantage might be possible if a more holistic and cross-functional approach was implemented at an eco-certified property. The theoretical discoveries of this investigation support future RBT studies while providing practical suggestions to enhance voluntary, eco-certification programs.

Chapter Eight

Conclusion

8.1 Introduction

The study was conducted with the aim of investigating whether there is a relationship among environmental performance, economic results and social media presence that contributes to the competitive advantage of FGLP eco-certified hotels. The aim was backed by the literature review, the methodology chapter provided the philosophical foundation and methods employed to the quantitative and qualitative findings to determine the outcome of the aim. This chapter reviewed the implication of the findings both in theory and practice, the contribution to knowledge and provides recommendations for future research.

8.2 Implications of Findings in Theory

After the completion of a comprehensive review of literature about sustainable tourism and marketing, the theoretical foundation of RBT was applied to the study. While other theoretical applications were considered, RBT was selected because of its intent to recognize a specific resource as a competitive advantage because of focus "on the firm's own decisions and competencies" (Hart and Dowell 2011, p. 1465) rather than the external factors that are not under the control of the firm.

Resources

This investigation discovered 15 statistically significant relationships, which are outlined in chapter six. The relationships were tested using variables that extended the definitions of 'resources' that were originally established based on fundamental business needs, such as increased capital, the skills and knowledge of employees and organizational processes (Hofer and Schendel 1978). While RBT resources were previously tested within the marketing domain, this study used the foundation that focused on channel relationships (Srivastava et al. 2001), information management skills and processes (Vorhies and Morgan 2005) and marketing communications (Vorhies and Morgan 2005) to test specific social media statistics as the variables within the study. These newly tested variables broaden the RBT definitions of 'resources.'

Recommendation: While this study found that 11 of the 15 statistically significant relationships produced negative outcomes, the findings only provided evidence of correlation, not causation in one environment at one point in time. These findings do not justify a hotel's rationalization to refrain and/or reduce its social media marketing efforts in an attempt to produce stronger fiscal returns. Instead, it simply demonstrated the opportunity to further test these variables in other environments, in a longitudinal study and to even include other aspects within each social media site in future research.

Competitive Advantage

The intent of RBT is the ability to identify a specific action or article a firm possesses that in turn provides a competitive advantage over other like firms. Such an advantage is categorized as either cost leadership or differentiation (Porter 2008) and this study sought to understand both advantages as it tested the cost of hotel utilities and the disparity among a hotel's social media footprint in a complementary manner. The statistical inquiry in this study did find that four of the tested relationships demonstrated a positive outcome and 11 demonstrate negative outcome. These outcomes provide the grounds for further testing to determine if these relationships predict a competitive advantage in other environments and/or in a longitudinal situation.

Recommendation: At the conclusion of the quantitative and qualitative portions of this study, the researcher was left contemplating two matters and their relation to understanding the competitive advantage of the proposed research hypotheses and the study's aim. The first enquiry that caused contemplation was about the importance and consideration of a holistic management approach that included a variety of business units in the eco-certification process. Porter (2008) recommended that "interrelationships among business units are the principal means by which a diversified firm creates value," (p. 3) which can strongly enhance a firm's ability to achieve competitive advantage (Porter 2008). The results, particularly the qualitative findings, provide the rationale to suggest that adopting a holistic management

approach could positively enhance an eco-certified property and potentially offer a competitive advantage.

The second enquiry was related to the perceived benefits that each FGLP property expected from the eco-certification program. Should or could the benefits offered to eco-certified properties tie to the competitive advantage that it receives? Theoretically, achieving a competitive advantage for a firm would be considered a benefit because it would demonstrate either cost leadership or differentiation (Porter 2008). Therefore, a better understanding about the benefits an eco-certification offers to a property and/or the benefits that a property expects to receive from an eco-certification might provide valuable insight to achieving a competitive advantage. Unfortunately, this study struggled with the lagging reliability score to the initial question in the study's survey, which sought to understand what FGLP hotels considered benefits. A better understanding, developed from statistically sound findings could prove to be valuable in understanding the benefits of an eco-certification and its potential connection to competitive advantage.

8.3 Implications of Findings in Practice

The focus of this study was the FGLP, but the intention of the study was to discover transferable findings that would have implications for other voluntary eco-certification programs within the hospitality industry. Therefore, the practical implications all derived from the researcher's experience with the FGLP, but each experience is expanded to ensure it considered how it could be broadly applicable to provide recommendations to individuals both in academia and industry.

Discrepancy of the Number of Certified Properties

One of the most egregious findings in the study was exposed with the comparison of the number of certified properties listed on the FGLP website and the number of applications that program officials had collected. The FGLP website claimed to have 689 properties as of March 2011 (FGLP 2013), which increased to 711 as of January 2015 (FGLP 2014b). Yet it had only collected 98 applications in 2014 (of which only 81 were complete) and had collected 374 in 2010 (of which only 238 were complete),

which leaves a large discrepancy in the number of properties that have completed the official procedure to earn the status for at least five years. The director of the FGLP explained "we are trying to get a handle on how things were done in the past and how they will be done in the future. But the last thing I want to do is penalize certified hotels by taking them off our list without knowing if we have not fully explained the scenario to them and since it's been so many years of troubles, we need to figure out who we need to talk with, with staffing changes and all" (Ira 2014b). The optimistic course of corrective action proposed by the director of the FGLP is admirable, but the lagging action both past and present is cause for apprehension and should be viewed as a point of the program that should be regularly checked for compliance.

The legitimacy of an eco-certification program rests in its ability to be a trustworthy appraiser of a firm's compliance with a specific scheme that generates positive effects (Honey 2002). Trust in any brand and/or firm evolves from a set of shared beliefs and expectations of reciprocal communication (Blau 1964), but when an organization provides inaccurate information, that trust is jeopardized and the brand integrity is derogated. Applying this knowledge, the suppression of truth of the accurate number of FGLP properties diminished the trustworthiness and integrity of the eco-certification with its internal and external stakeholders. The primary contacts at FGLP hotels confirmed this angst in their survey comments, which included "please put an end to the lies," and "let's keep it real." One went on to say, "I know that so many of those properties have not complied with the new standards. I feel like a child when I say this, but it is not fair to the properties that spent weeks completing the lengthy electronic application." While this study did not collect findings from other stakeholders, future research should also consider past and potential guests of FGLP properties and state of Florida elected officials who approve the operating income for the FGLP.

> Recommendation: Honesty. An eco-certification that confers an award of superior operating standards should also operate under the same standards. If the program expects honesty in the self-reporting nature of the eco-certification application, it should in turn present an honest account of the program to all stakeholders. The researcher recommends a checks-and-

balances system that would provide a program report to all stakeholders on a reoccurring basis. In the case of the FGLP, the eco-certification could produce an annual overview of the results from the applications submitted by the hotels. If such a standard had been in place, FGLP stakeholders (certified hotels, government officials and consumers) may have recognized the problem earlier and could have taken corrective actions sooner. In addition, "reporting allows an enterprise or organization to describe the outcome of its efforts to manage its sustainability impacts, and to share this information with stakeholders" (UNEP and UNWTO 2005, p. 99), which justifies the on-going value of the program.

Importance of Marketing and Communication

The concerns and recommendations expressed by the FGLP primary contacts in their survey comments about marketing and communications are grounds for FGLP officials to reflect on future improvements to the program's marketing tools with a focus on the social media offerings and ongoing communication with certified properties. Primary contacts expressed disappointment with the current marketing tools that only include posters and towel reuse cards in multiple languages. They would like to see the ability to integrate their "corporate logo and the Florida green logo" in communication items, sought ideas to incorporate the FGLP with its "in-house television channel" and would like to see the FGLP logo used in state tourism advertisements. One survey respondent reflected on a positive tool that its corporate partner provided that could be a consideration for FGLP officials. They explained, "my manager gets monthly emails from corporate that have messages and photos for us to use on facebook, instagram and twitter. I wonder if we could get something like this or even stories to link to from the green lodging group." This recommendation of adding social media guidance from an assistant manager supports research that found that "there is a higher level of perceived trustworthiness and reliability of UGC compared with traditional tourism information sources" (Leung et al. 2013). Therefore, the addition of marketing tools geared toward social media outlets hold the possibility of garnering a greater impact compared to traditional outlets (Leung et al. 2013; Anderson 2012).

In addition primary contacts have requested "regular communications" with FGLP officials about program logistics to ensure it's not a "one-way relationship." Combining the desire for more communication with the need to "break down corporate silos" (McInerney 2013) to achieve broad cross-functional results, FGLP officials should consider sending regular updates to multiple contacts at each FGLP property to increase the dissemination of program information and benefits.

> Recommendation: Capitalizing on the external marketing efforts and the internal communication efforts of an eco-certification holds the possibility to increase the benefits a hotel receives as a "meaningful marketing tool" (Gross et al. 2014, p. 166). Eco-certification program officials and certified properties should assess how and if they are taking full advantage of marketing benefits available and should consider the inclusion of social media outlets to share the eco-friendly attributes offered via the program. In addition, interaction should not be exclusively directed at customers. Communicating with multiple employees that span cross-functional responsibilities at a property hold the possibility to increase the broad benefits a hotel receives because of the diverse job-specific duties that are the focus of each employee. Such a diverse mind-set provides the opportunity to capitalize on the unique understanding of a job function and how that understanding may act as a benefit for ongoing eco-certification participation.

FGLP Application

The study's research sample is comprised of properties that submitted the updated FGLP application. The official paperwork to achieve certification increased from a three-page document to a 24-page document, which attracted criticism in the study's survey where a primary contact requested a reduction in the length of the application. They went on to say, "it is ridiculously long and asks questions that seem completely unnecessary." While it was out of the scope of the current research study to investigate the importance and impact of each question, the lack of review of the submitted data from program officials solicits the enquiry of the need for such a data-heavy document. How did the FGLP originally intend on using the data? Was there a plan to use the findings for each of the questions? Unfortunately the researcher was

not granted an opportunity to pose such questions to FGLP officials. That said, if a plan for the application results was not established, the FGLP should consider the reduction of the application to potentially increase participation and include only queries they intend on utilizing or that demonstrate a proven commitment to benefit the triple bottom line. Such a reduction might also encourage the completion of the application, which was the cause for reducing the research sample by 18 percent due to incomplete data.

The FGLP application, which contains 237 questions, does not include a query or award any points specifically related to the property's use of the FGLP logo, which minimizes its benefit as a "meaningful marketing tool" (Gross et al. 2014, p. 166) by not calling attention to it. Not only might the property not benefit from the eco-friendly marketing effort, the FGLP does not capitalize on collective dissemination of the logo to current and/or potential visitors to the state of Florida (Honey 2002). FGLP officials should consider the inclusion of a line of questioning within the application related to the use of the FGLP logo at its property, in its marketing efforts and consider adding an open-ended comment related to communication and/or marketing considering it's prevalence in the study's survey.

> Recommendation: The eco-certification application procedure and on-going documentation should be developed based on the information the program officials intend on using, deem necessary to quantify the qualifications of a hotel's environmentally friendly procedure or to publicize the marketing logo to current and/or future visitors. Programs should also consider working with an overarching government agency or an international/national trade group to develop a brief set of standardized questions so at least a portion of the data collected would be comparable and recognizable across regions.

Future Research Consideration

This mixed methods study did not follow the originally intended path, which included multiple semi-structured interviews. It reinforced that research outside of a strict laboratory setting without control groups should allow for contingency plans. These adjustments to the original plan may contribute to the greater understanding of the

study or in the case of this study, highlight a weakness to consider for future investigation. The evasive avoidance of interviews with both FGLP primary contacts and the officials of the FGLP, after achieving a 63 percent participation rate with the web-based survey, is of interest. This was coupled with the apprehensive comments gathered in a brief dialog with a primary contact where he indicated he did not "want to jeopardise our green standing" and feared "program leaders" would find out and "strip our hotel's green credential." This hesitation and the lack of willingness to participate in interviews, after an initial agreement to participate, is an indication to government leaders to review the workings of the FGLP.

> Recommendation: While this situation may only impact the FGLP, future research of eco-certification properties might consider a strictly anonymous approach to increase participation rates and avoid the uncertainty of gathering data verbally that was encountered in this study.

8.4 Contributions of this Research

The previously highlighted gaps in research between sustainable tourism and marketing at eco-certified hotels were the focus of concentration in this thesis. The extant literature on the two topics provided a foundation of empirical support to proceed with an investigation of how these research domains might contribute to the competitive advantage within the FGLP. This study was the first to investigate the relationship among environmental performance, economic results and social media presence that may contribute to the competitive advantage at eco-certified hotels.

Challenged by Connelly et al. (2011) to develop a theoretical foundation that "researchers can use to build knowledge about sustainability and marketing" (Connelly et al. 2011, p. 87), the findings in this study made an original contribution to knowledge with the initial application of the theoretical underpinning of RBT to the physical and fiscal operations of eco-certified hotels in relation to its social media presence. This examination revealed the statistical relationships outlined in chapter six and extended the definition of 'resources' from a marketing perspective with the tested dependent and independent variables.

The social media variables tested in this study broaden the RBT 'resources' beyond fundamental business practices (Hofer and Schendel 1978), channel relationships (Srivastava et al. 2001), information management skills and processes (Vorhies and Morgan 2005) and marketing communications (Vorhies and Morgan 2005) to include specific social media metrics. This extension of the marketing understanding of RBT within the context of operational resources within eco-certified hotels also contributed to the emergent body of literature that connects sustainability and marketing (Dief and Font 2010; Connelly et al. 2011; Zhang et al. 2014). While this study does not predict the basis of a firm's competitive advantage (Barney and Clark 2007; Kozlenkova et al. 2014;), it does establish the first understanding about the relationship that can now be tested in other environments to determine if similar patterns of results are found, which could present predictable outcomes. The establishment of such a foundation of understanding addressed the "underdeveloped" (Connelly et al. 2011, p. 87) nature of the "theories that marketing scholars use to analyze and describe the sustainable practices" (Connelly et al. 2011, p. 87) combined with the need to "explore the potential of this emerging data and communication resource" (Noone et al. 2011, p. 293) found on social media.

Using a mixed-methods approach within management studies is not a commonly applied strategy (Molina-Azorin 2011), but its application in this study extended the use of such a strategy to gain a holistic understanding of the research environment and extended the use of mixed methods research within sustainable tourism (Molina-Azorín and Font 2015). If this study had committed to a solely quantitative approach, the findings would still demonstrate both positive and negative relationships among the named variables, but would not have uncovered the concerns with the marketing support from the FGLP and the appeal for adjustments to the FGLP application. The collection of statistical and narrative findings in this study capitalized on the pragmatic underpinning calling "attention on the research problem in social research and then using a pluralistic approaches to derive knowledge about the problem" (Creswell 2009, p. 10). Ultimately contributing the recommendation to encourage firms to work together and break down silos to promote a stronger organizational structure supporting the relationship among environmental performance, economic results and social media presence.

This study extended the findings of previous research about the social media participation of the hospitality industry. In comparison to the Chan and Guillet (2011) study of 76 hotels in Hong Kong, the 81 FGLP properties have an increased presence on four of the five "most widely used social media sites in the industry" (Chan and Guillet 2011, p. 353). While differences between the two study's variables exist (i.e location, eco-certified, year), the overall findings reveal that hotels remain committed to a presence on social media sites. The two studies were not coordinated and sought different research aims, but the growth in social media participation on nearly all of the most used sites (Chan and Guillet 2011) contributes to a longitudinal view of the industry's involvement with the sites and provides a general assumption that social media continues to be relevant to hoteliers as displayed in table 8.1.

Table 8.1 Comparison of Social Media Participation by Hoteliers in 2011 and 2014 (adapted from Chan and Guillet 2011)

2014		2011	
Florida		Hong Kong	
81 Hotels in Sample		76 Hotels in Sample	
FGLP		No Eco-Certification Data Collected	
Website	**Participation**	**Website**	**Participation**
Twitter	55.6%	Twitter	56.7%
Facebook	92.6%	Facebook	53.7%
YouTube	90.1%	YouTube	38.8%
Flickr	90.1%	Flickr	26.9%
TripAdvisor	100%	TripAdvisor	23.9%

This study also made practical contributions in the management of voluntary eco-certification programs with the recommendation for regular oversight and was the first publication to distribute the descriptive statistics of the FGLP application in the program's eleven-year history.

8.5 Limitations

This study is not without limitations and therefore must be viewed under the contextual understanding of these boundaries. The limitations include constraints

and/or considerations relevant to the study design and to the research instruments utilized.

One of the study's limitations relates to the cross-sectional research design to gather data from the FGLP population at only one specific time. Whereas a longitudinal designed study, similar to Deng and Burnett (2002) and Anderson (2012) may have provided a stronger case with the replication of correlated results over a period of time. And while the findings of this study could be generalized for other regional eco-certification programs, the sample had a limited scope of properties in a tourism-centric, tropical region. These limitations might demonstrate higher occupancy rates because the visits are not limited to a shortened period, when compared to the seasonality of other destinations and/or increased utility usage accommodating for warm weather and water-related activities.

The selection of research instruments applied to this study possibly limited and/or influenced the findings. Firstly, the web-based survey included a question about the number of staff members supporting social media efforts at the property, which may have influenced how the respondents replied to other questions in regards to their property's communication or web efforts. The second limitation of the survey was its dependence on a mono source. The survey was distributed electronically to the individual identified as the primary contact on the FGLP application, which was inclusive of eight job-specific categories. The job responsibilities of the respondent may have influenced the responses, which may have been confronted in the intended follow-up interviews. The third consideration of the survey was not taking advantage of the high response rate by including more open-ended questions. If the researcher had known the apprehensive nature of the respondents to the follow-up interviews, she would have provided additional opportunities to address questions related to the study's aim. That said, the researcher balanced the regret with the fact that the response rate may have decreased if the survey increased in size.

Initially, the researcher assumed the lack of semi-structured interviews would be considered a limitation to the current study. While the contribution of the interview findings would be of interest, the evasive avoidance of interviews is also of interest

and provided a different perspective to view the eco-certification program. The adjustment to the proposed research plan simply provided an adjusted context to the study findings.

8.6 Future Research

Seeking, gaining and sustaining a competitive advantage for eco-certified hotels will require ongoing research to uncover complementary results of potentially seemingly independent factors and the commitment of programs and hoteliers to embrace the complementary results. This research built upon previous research within the hospitality industry (Chan and Guillet 2011; Anderson 2012; Zhang et al. 2014) and RBT (Srivastava et al. 2001; Connelly et al. 2011; Kozlenkova et al. 2014) to establish a foundation for future research connecting the three topics of environmental performance, economic results and social media presence that contributed to the competitive advantage within the FGLP.

Researchers should consider further investigation into the relationships among environmental performance, economic results and social media presence that contribute to the competitive advantage both at eco-certified and hotels and those that hold no certifications. Other research agendas could include a larger sample and a different region. The recommendation is based on the conflicting findings of this study and Anderson (2012), whereas this study found mostly negative fiscal relationships and found no relationship with TripAdvisor, Anderson (2012) found a positive relationship with TripAdvisor. Anderson (2012) did not account for eco-certification, had a larger sample and was geographically diverse across two continents. In addition, Anderson's study was a longitudinal study conducted over two and a half years, which afforded the ability to compare changes over time. A continuation of this FGLP study with the next set of annual applications submitted by eco-certified properties would begin to provide a longitudinal view of the FGLP, but an ideal longitudinal study of the FGLP would embark in January 2017. At this date, the certified properties included in this study's sample would be required to submit its mandatory three-year application, giving the researcher the ability to compare the same sample set. In addition, a continuation of this FGLP study with the January 2017 data would allow a longitudinal assessment of the VRIO framework underpinning

RBT. The combination of data from this study along with the new data would permit an evaluation of the third and fourth categories, which consists of 'imperfectly imitated' and the appraisal of the firm's 'organization' to ensure it takes full advantage of its resources. The addition of this insight would determine if the FGLP had achieved a SCA with the outlined relationships (table 7.7).

Future research that involves the environmental performance and economic results within the hospitality industry should consider further investigation into the relationship with the Twitter website. Out of the seven social media websites examined in this study, Twitter proved to have the most statistically significant relationships with six out of the fifteen relationships emerging from this site. While this study found that Twitter followers increased the cost of water, waste and energy. It also found that inversely, Twitter following decreased the cost of water and waste. Future research might consider if this inverse fiscal relationship that was found between Twitter followers and following exists within non-certified hotels and even within other industries.

Additionally, this study focused its marketing perspective on social media and their respective participation statistics. A future study might consider a contextual review of messages posted in these social media websites to analyze for tone, media usage and response rate of the property, similar to the study conducted by Villarino and Font (2015). Furthermore, the marketing perspective could be expanded to investigate in-house advertising, external paid advertising and even external earned media efforts. The expanded examination could still include the hotelier and the eco-certification program officials, but might consider including consumers and the organization tasked with promoting tourism within the region.

More research is required in understanding the development and ongoing operation of eco-certification programs. The FGLP revealed many deficiencies and while some of these weaknesses might be restricted to this particular program, a thorough investigation about the lifecycle and operation of voluntary eco-certification programs may reveal similarities that can be addressed and generalized to aid multiple programs. The continuation of research into eco-certifications should also investigate

what benefits hoteliers consider important, which is similar to the first question of the study's web-based survey that uncovered a lagging reliability score of r =.408, which fell below the acceptable alpha reliability coefficient of r =.70 (Nunnaly 1978).

In addition to the specific future research topics previously described, the researcher reiterates the editorial appeal in the Cornell Hospitality Quarterly "to get scholarly research out of its silos" (Canina 2010, p. 453). Future research should consider including an inquiry into the holistic nature of the firm in RBT studies. Just as this study spanned the concepts of sustainable tourism and marketing seeking RBT as the connecting factor, "future research ought to take an interdisciplinary approach that focuses on models, theories, and applications to drive innovation and create value. An interdisciplinary approach to research will enable us to examine issues that involve not only the customer and the firm but also the broader organizational, market, competitive, economic, and cultural forces that shape the design and service experience"(Canina 2010, p. 453). Such an approach has the possibility to reveal complementary results (Porter 2008) among unrelated variables so that "we might better understand the holistic and interrelated nature of complex organizations," which offers "the greatest potential to address the larger problems facing today's management" (Canina 2010, p. 453).

8.7 Conclusion

The adoption of an eco-certification at a hotel garners multiple benefits (FGLP 2013) and these benefits were categorized using the triple-bottom line (Carter and Rogers 2008) and investigated in this study. While eco-certifications were not developed explicitly for marketing within social media websites, these two-dimensional logos were designed as a "meaningful marketing tool" (Gross et al. 2014, p. 166) that can be used in an online environment to raise consumer awareness about a firm's commitment to environmental standards. Therefore, gaining the understanding of what connects the "added marketing benefit" (Deng-Westphal et al. 2015, p. 230) and environmental outcomes holds the possibility to garner positive results for firms that commit to eco-certification standards.

The study sought to understand the relationship among the environmental performance, economic results and social media presence of FGLP to determine if a

particular combination of these variables contributed to a property's competitive advantage. The established aim and objectives for this study were achieved by applying a mixed methods approach, which revealed 15 statistically significant relationships, yet only four contributed a positive economic result and 11 acted as a negative drain to an eco-certified hotel. These quantitative findings were paired with qualitative concerns about the program's commitment to marketing and communication efforts. The qualitative findings also exposed a management factor that may be limiting the relationship among the three areas of interest investigated in the study, which could be addressed if a more holistic and cross-functional management approach is implemented at an eco-certified property.

While the findings of this study demonstrated a relationship among environmental performance, economic results and social media presence, the results offered a divided stance on the contribution to a competitive advantage of both positive and negative for the eco-certified properties. Yet, it must be reinforced that the results included in this study only demonstrated a correlation between variables, and did not imply causation. The 15 statistically significant relationships were not tested to predict a specific outcome. These findings contributed to the growing research between sustainability and marketing (Connelly et al. 2011; Kozlenkova et al. 2014), and the use of social media within the hospitality industry (Chan and Guillet 2011; Anderson 2012), which extended the theoretical foundation of RBT for future research. The contribution to knowledge from this study and the potential impact on practice will hopefully continue to foster a relationship between theory and practical implication to encourage sustainable acts within the hospitality industry.

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THE RELATIONSHIP AMONG ENVIRONMENTAL PERFORMANCE, ECONOMIC RESULTS AND SOCIAL MEDIA PRESENCE

A Study of Voluntary Eco-Certified Hotels in Florida

NICOLE J. CHMURA

Volume 2

A thesis submitted in partial fulfilment of the
requirements for the degree of
Doctor of Philosophy

QUEEN MARGARET UNIVERSITY

2016

Table of Contents

Appendices

The Florida Green Lodging Program

Designation Application

INSTRUCTIONS

This application is a comprehensive evaluation tool that details the program's requirements and provides Best Management Practices and Technical Assistance to help you achieve Florida Green Lodging designation.

To complete the Designation Application, conduct a thorough environmental assessment of your property and implement practices in the five areas of sustainable operations:

I. Communication and Education (Guests, Employees, Public)
II. Waste Reduction, Reuse, and Recycling
III. Water Conservation
IV. Energy Efficiency
V. Indoor Air Quality

You may include environmental practices your facility has already implemented. To count a practice, it must be implemented in at least 50 percent of the facility, or at least 50 percent of the time. For example, high efficiency lighting, i.e. CFLs, must be used in at least 50 percent of the light fixtures at your facility or green cleaners must be used at least 50 percent of the time. Documentation will be required to verify certain practices.

To receive credit for an environmental practice you have implemented, please check the "Yes" box at the end of each line. Once you have selected the applicable initiatives in that section, you will then add the points for the selected initiatives and place the total point value in the last box of the point column. If you use an environmental practice that is not listed, it can be entered as an "Innovative Best Practice" in the space provided at the end of each category.

All requirements must be met and environmental practices implemented prior to submitting the application.

The application can be completed electronically. Input the required data into the fields and use the check boxes, where applicable. When completed, save a copy as a .pdf and submit it, along with the required documentation, to GreenLodging@dep.state.fl.us. The Florida Green Lodging Program will evaluate your application and documentation, and notify you of your designation status.

Thank you for your interest in the Florida Green Lodging Program. We look forward to working with you to protect Florida's environment and conserve our natural resources for generations to come.

TERMS & CONDITIONS

The Terms and Conditions apply to both the Florida Green Lodging Web site and participation in the program. *Please read carefully before proceeding with the application.*

Florida Green Lodging Program
DESIGNATION APPLICATION

The Florida Department of Environmental Protection (DEP) applauds your decision to participate in the Florida Green Lodging Program by illustrating your commitment to protecting and conserving Florida's environment. For assistance completing this application, visit www.dep.state.fl.us/greenlodging.

HOTEL PROFILE

Name of Property: _____

(As it will appear on the Florida Green Lodging Web site)

Physical Address: _____

City: _____ Zip: _____

Main Phone Number: _____

Web Address: _____

General Manager: _____ Phone Number: _____

E-mail Address: _____

Primary Contact Responsible for Green Lodging Designation Effort

Name: _____ Title: _____

Phone Number: _____

E-mail Address: _____

Property Information

Type of lodging facility: (check one)

☐ Hotel/Motel ☐ Cabin

☐ Bed & Breakfast/Inn ☐ Condo-hotel/Timeshare

Total Building Square Feet: _____

Number of Guest Rooms/Units: _____ Total Guest Room Square Feet: _____

Number of Meeting/Conference Facilities: _____

Total Conference Square Feet: _____

Number of Restaurants: _____

Ownership: (check one)

☐ Corporate ☐ Franchise ☐ Management Company ☐ Individual/Partnership

Member of Audubon International's Green Lodging Program ☐ Yes ☐ No

BASELINE ENVIRONMENTAL PERFORMANCE DATA

To improve environmental performance, a facility must first measure its current impact. This information helps the facility set goals and measure improvements that can be shared with guests and employees. Additionally, it helps the Florida Green Lodging Program promote designated facilities.

Please report solid waste, water consumption and energy usage information from invoices for the previous 12 months. Enter reporting period from: _____ (mm/yyyy) to: _____ (mm/yyyy)

If an item is not applicable, select N/A.

SOLID WASTE			
If solid waste information is not available, provide an estimate. An estimate can be calculated by weighing or measuring consumption/materials for one week. Average the weekly figure, making sure to correct for seasonal variations in your business. Multiple the weekly average by 52 to get an estimated total for the year.			
Measurements must be the ANNUAL totals in cubic feet.			
Volume to Landfill		☐ Estimate	☐ N/A
Volume Being Reused, Recycled or Composted		☐ Estimate	☐ N/A
Total Cost ALL Waste Disposal			

WATER	
Measurement must be ANNUAL total in gallons.	
Volume used (for all operations, including irrigation and pool)	
Total Cost ALL Water	

ENERGY			
Measurements must be ANNUAL totals.			
	Consumption	**Cost**	**N/A**
Electricity Use (kWh)			☐ N/A
Natural Gas (cubic ft)			☐ N/A
Oil (gal)			☐ N/A
LPG (gal)			☐ N/A
Renewable Energy (type and unit)			☐ N/A
Other Energy (type and unit)			☐ N/A
Total Cost ALL Energy			

ENVIRONMENTAL REQUIREMENTS

Communication and Education:

Check ONLY if the practice is implemented in at least 50 percent of the facility, or at least 50 percent of the time. Documentation will be required to verify practices noted in *italics*. For assistance, see Best Management Practices and Technical Assistance..

How you communicate your goals, aspirations and accomplishments to your owners, employees and the public lies at the core of your environmental program. Your role as accommodation professionals allows you a great opportunity to educate. With that opportunity also comes a responsibility. The effective communication of your environmental efforts to your constituents has the potential to affect great environmental benefits, not only at your facility but also where your constituents live, work and play. The creation of a formal environmental policy is a critical step in communicating your facility's environmental vision. It is the road map of your environmental efforts, communicating where you are and where you hope to be in the future. This document is essential because it is a living document that transcends personnel change, providing a steady compass for your environmental direction.

A minimum of **44** points must be obtained from this section in order for it to be considered complete and satisfied.

1. Communicate your facility's environmental initiatives to guests and staff. • *Submit samples of communication. Submissions can be pictures or digital files.*	5	☐ Yes
Guest Outreach: Sharing your environmental efforts with your guests		
2. Use of environmentally specific in-room collateral.	3	☐ Yes
3. Use of facility's in house channel to communicate your environmental messages.	4	☐ Yes
4. Use of in room directory to communicate environmental efforts.	3	☐ Yes
5. Direct communication by facility staff. • *Provide example:*	5	☐ Yes
6. Encourage and solicit the local community in your environmental efforts. • *Describe community interaction:*	4	☐ Yes
7. Share your environmental successes with the community.	3	☐ Yes
8. Encourage and solicit guest cooperation and participation in environmental initiatives. • *Describe environmental initiatives:*	4	☐ Yes
9. Provide tours of your facility to guests and the public that highlight environmental improvement projects.	4	☐ Yes

10. Provide a survey, suggestion box or online evaluation for guests to allow feedback on your facility's environmental practices • *Submit a survey sample, picture of suggestion box or link to online evaluation* Link:	4	☐ Yes
11. Host a community or guest event highlighting your facility's green practices. • *Submit supporting documentation and describe event:*	4	☐ Yes
Staff Outreach: Educating your staff on your environmental efforts		
12. Establish an environmental task force or "Green Team" and meet quarterly, at a minimum, to evaluate and improve environmental initiatives. • *Submit meeting dates, number of attendees and green topics for meetings.*	5	☐ Yes
13. Provide staff with bi/tri-lingual green education materials and training. • *Languages:*	4	☐ Yes
14. Conduct regular staff training for : • *Provide a time frame for these trainings:*		☐ Yes
• Handling of hazardous sensitive materials.	3	☐ Yes
• Best environmental management practices.	4	☐ Yes
• Proper disposal and handling procedures in chemical storage areas.	3	☐ Yes
• Importance and rationale for environmental practice implementation including: economic, environmental and social considerations.	5	☐ Yes
15. Spot reminder is regularly conducted during shift meetings. • *Departments:*	4	☐ Yes
16. Include environmental policies in advertising materials and/or on Web site. • *Submit sample of advertising materials or link to Web information.* *Link:*	4	☐ Yes
17. Have staff and/or management serve as mentors to assist other facilities seeking designation. • *List facilities mentored:*	4	☐ Yes
18. Have a formal written comprehensive environmental policy. • *Submit copy of written policy*	5	☐ Yes
19. Develop a written strategic environmental action plan. • *Submit copy of action plan*	5	☐ Yes
20. Implement a strategic environmental action plan. • *Provide your timeline, schedule, checklist, etc of plan implementation.*	4	☐ Yes

21. Provide a survey, suggestion box or online evaluation for employees to allow feedback on your facility's environmental practices. • *Submit a survey sample, picture of suggestion box or link to online evaluation.* *Link:*	3	☐ Yes
Other outreach and education initiatives		
22. Dedicated environmental section in the facility newsletter. • *Provide copy of the section*	4	☐ Yes
23. Encourage employee best environmental practices outside of work : recycling, carpooling, etc.	3	☐ Yes
24. Subscribe to environmental information resources. • *List what resources you subscribe:*	2	☐ Yes
25. Enroll in voluntary environmental programs. • *Describe programs:*	4	☐ Yes
26. Establish at least one individual for wildlife inventorying purposes.	3	☐ Yes
Purchasing		
27. Have a formal written purchasing policy that includes:	5	☐ Yes
• Encouragement of regular equipment replacement to maintain efficiencies.	3	☐ Yes
• MSDS review provision.	2	☐ Yes
• Regular review of product environmental information from suppliers.	3	☐ Yes
• Creation of a list of specific environmentally preferred products.	4	☐ Yes
• Local purchasing practices implemented wherever possible.	3	☐ Yes
28. Innovative Best Practice • *Please describe any additional Communication and Education-related practice implemented. Submit any supporting documentation.*		☐ Yes
Communication and Education Point Total		

Waste Reduction, Reuse and Recycling:

Check ONLY if the practice is implemented in at least 50 percent of the facility, or at least 50 percent of the time. Documentation will be required to verify practices noted in *italics*. For assistance, see Best Management Practices and Technical Assistance.

Florida's tourism industry serves an estimated 40 million visitors annually. More than 50 percent of these visitors are hotel guests during some portion of their stay. The waste generated by these guests constitutes a large portion of the state's commercial waste stream. If a hotel's waste stream is not reduced or recycled, it can contribute to the state's overall environmental problems. Reducing materials at their source, coupled with recovery, reuse and recycling prevents pollution and reduces or eliminates treatment and disposal costs. The preferred method for reducing waste is to prevent it in the first place through pollution prevention and source reduction, followed by material reuse and recycling.

A minimum of 54 points must be obtained from this section in order for it to be considered complete and satisfied.

1. Recycle ALL of the following materials, if generated and if services are available in your area. Indicate materials this facility currently recycles:		
• Plastic	4	☐ Yes
• Aluminum cans	4	☐ Yes
• Steel cans	4	☐ Yes
• Glass	4	☐ Yes
• Cardboard	4	☐ Yes
• Office paper	4	☐ Yes
• Newspaper	4	☐ Yes
• Magazines	4	☐ Yes
• Batteries • *Name of Battery Recycler:* _____	4	☐ Yes
• Ink cartridges	3	☐ Yes
• Waste cooking oil	4	☐ Yes
• Fluorescent bulbs • *Name of Fluorescent Bulb Recycler:* _____	3	☐ Yes
• Electronics • *Name of Electronics Recycler:* _____	3	☐ Yes
2. Provide recycling bins for guests at multiple locations throughout the property. Indicate items guests can recycle: • *Items and location of guest recycle bins:* _____		
• Aluminum cans	5	☐ Yes
• Plastic bottles	5	☐ Yes

• Office paper	5	☐ Yes
• Newspaper	5	☐ Yes
• Magazines	5	☐ Yes
3. Purchase 30% or higher post-consumer recycled content for one of the following products: • *Supplier and item number:* _____		☐ Yes
• Paper napkins	3	☐ Yes
• Toilet tissue	3	☐ Yes
• Paper towels	3	☐ Yes
• Facial tissue	3	☐ Yes
• Envelopes	3	☐ Yes
• Office paper	3	☐ Yes
• Other: _____	3	☐ Yes
4. Institute one of the following source-reduction activities:		☐ Yes
• Bulk Purchasing • *Enter item and describe:* _____	4	☐ Yes
• Reduced Packaging	4	☐ Yes
• Manufacturer Take-back	4	☐ Yes
5. Track waste usage. • *Documentation must be entered in Baseline Performance of Application.*	4	☐ Yes
6. Compost food waste.	5	☐ Yes
7. Use reusable goods in place of disposable goods. Indicate items currently used:		
• Re-fillable Soap Dispensers	4	☐ Yes
• Re-Fillable Shampoo Dispensers	4	☐ Yes
• Glass drinking glasses	3	☐ Yes
• Returnable delivery containers	3	☐ Yes
• Cloth Napkins and Table Cloths	2	☐ Yes
• Re-usable place service (cutlery, plates, cups)	3	☐ Yes
8. Use refillable containers instead of single-use packets/containers.	3	☐ Yes
9. Set printers and copiers to duplex (print on two sides) by default.	3	☐ Yes
10. Print advertising, educational and promotional pieces on recycled paper. • *Submit samples of materials.*	3	☐ Yes
11. Recycle used office paper for note pads.	3	☐ Yes
12. Donate excess food, toiletry items, linens, furniture and/or other items to local charities and shelters, where available. • *Indicate what items are donated and the name of the organization:* _____	4	☐ Yes

13. Provide newspapers to guests by request only.	3	☐ Yes
14. Minimize or eliminate plastic bag use in retail operations.	3	☐ Yes
15. Replace polystyrene (Styrofoam) with reusable, biodegradable or sustainable products.	4	☐ Yes
16. Innovative Best Practice • *Please describe any additional Waste Reduction, Reuse and Recycling-related practice implemented. Submit any supporting documentation.*		☐ Yes
Waste Reduction, Reuse and Recycling Point Total	☐	

Water Conservation:

Check ONLY if the practice is implemented in at least 50 percent of the facility, or at least 50 percent of the time. Documentation will be required to verify practices noted in *italics*. For assistance, see Best Management Practices and Technical Assistance.

Aside from the depletion of a precious natural resource, excess water use leads to side effects from water treatment chemicals, energy for pumping and heating and from the release of wastewater back to the environment. In addition to being large-volume users of water, hotels often use large amounts of detergents, cleaners and other chemicals that can be detrimental to our environment. Protecting the environment by lessening the impact a lodging facility has on the environment also assists in protecting the very reason its guests come to Florida; the beautiful beaches, rivers, springs and lakes. Increasing water efficiency is one of the most significant opportunities for realizing cost savings. Many of the water-saving solutions detailed below are easy and affordable to implement. Aside from the obvious decrease in water bills, savings are also realized through decreases in electricity, sewage and chemical costs.

A minimum of 39 points must be obtained from this section in order for it to be considered complete and satisfied.

Management Practices		
1. Use a preventative maintenance schedule to find and repair leaky faucets, toilets and pipes. • *Submit current schedule.*	4	☐ Yes
2. Track water and wastewater usage. • *Documentation must be entered in Baseline Performance of Application.*	4	☐ Yes
3. Have a water assessment conducted by local utility company, local water management district or other appropriate organization. • *Assessment date:* _____ • *Conducted by:* _____ **OR proceed to #4**	4	☐ Yes
4. Conduct a self-audit using the South Florida Water Management District's Water Efficiency Self-Assessment Guide. • *Submit completed worksheets.*	5	☐ Yes
5. Offer a towel reuse program in guest rooms. • *Submit a copy of guest room signage.*	3	☐ Yes
6. Offer a linen reuse program in guest rooms. • *Submit a copy of guest room signage.*	3	☐ Yes
7. Conduct regular water pressure monitoring.	3	☐ Yes
8. Sweep sidewalks and other impervious surfaces rather than with use of water.	3	☐ Yes
9. Participate in the Water Champ program, where available.	4	☐ Yes

Public Washrooms		
10. Low flow faucets, 1.5 gallons or less per minute. Aerators are included. • *Manufacturer:* _____ • *Product number:* _____	3	☐ Yes
11. Faucets flow controller or auto shut off. • *Manufacturer:* _____ • *Product number:* _____	3	☐ Yes
12. Faucets with photo sensors • *Manufacturer:* _____ • *Product number:* _____	3	☐ Yes
13. Low flow shower heads (2.0 or less GPM). • *Manufacturer:* _____ • *Product number:* _____	3	☐ Yes
14. Water conserving toilets (6-liter / 1.6 gal per flush). • *Manufacturer:* _____ • *Product number:* _____	3	☐ Yes
15. Dual flush toilets (.75 /1.6 gal per flush). • *Manufacturer:* _____ • *Product number:* _____	4	☐ Yes
16. Water conserving retrofit device in toilet. • *Manufacturer:* _____ • *Product number:* _____	3	☐ Yes
17. Toilets with photo sensors. • *Manufacturer:* _____ • *Product number:* _____	4	☐ Yes
18. Urinals with photo sensors. • *Manufacturer:* _____ • *Product number:* _____	4	☐ Yes
19. Waterless urinals. • *Manufacturer:* _____ • *Product number:* _____	4	☐ Yes

Guest Rooms		
20. Low flow faucets, 1.5 gallons or less per minute. Aerators are included. • *Manufacturer:* _____ • *Product number:* _____	3	☐ Yes
21. Low flow shower heads (2.0 or less GPM). • *Manufacturer:* _____ • *Product number:* _____	3	☐ Yes
22. Water-conserving toilets (6-liter / 1.6 gal per flush). • *Manufacturer:* _____ • *Product number:* _____	4	☐ Yes
23. Dual flush toilets (.75 /1.6 gal per flush). • *Manufacturer:* _____ • *Product number:* _____	4	☐ Yes
24. Water-conserving retrofit device in toilet. • *Manufacturer:* _____ • *Product number:* _____	3	☐ Yes
Kitchen		
25. Low-flow, pre-rinse spray nozzles, 1.25 gallons or less per minute, in kitchens. • *Manufacturer:* _____ • *Product number:* _____	3	☐ Yes
26. Tap flow controller or auto shut off. • *Manufacturer:* _____ • *Product number:* _____	3	☐ Yes
27. Photocells on faucets.	3	☐ Yes
28. Use counter-current rinsing OR High-efficiency, ENERGY STAR®, dishwashers. 1 gal per rack or 4.5 gal per load. • *Manufacturer:* _____ • *Model number:* _____	4	☐ Yes
Laundry		
29. Use final rinse water as pre-rinse water for subsequent cycles in washing machines.	3	☐ Yes
30. Where applicable, guests are encouraged to run full capacity loads for dishwashers and washing machines	4	☐ Yes
31. Use of Ozone washing system.	5	☐ Yes
32. Use of steam traps.	3	☐ Yes

Ice Machines		
33. Air cooled • *Manufacturer:* _____ • *Model number:* _____	4	☐ Yes
34. Cut off valve • *Manufacturer:* _____ • *Model number:* _____	3	☐ Yes
Grounds and Landscaping		
35. Use of soaker hoses and/or drip lines.	3	☐ Yes
36. Mulching of flower beds.	3	☐ Yes
37. Routine inspection and repair of delivery hoses, pipes and sprinkler heads.	3	☐ Yes
38. Implementation of cisterns and rainwater collection. • *Approximate gallons collected:* _____	4	☐ Yes
39. Hot tubs and pools covered when not in use.	3	☐ Yes
40. Practice Florida-Friendly Landscaping™, including, drought-tolerant plants, rain gauges and/or moisture sensors and efficient irrigation.	4	☐ Yes
41. Implementation of "Gray" Water system for irrigation.	4	☐ Yes
42. Best management practices for timer settings for optimum water conservation.	3	☐ Yes
43. Monitoring of sprinkler head system to avoid irrigation of impervious surfaces.	3	☐ Yes
44. Inspect, clean and adjust cooling towers, ice machines, boilers/hot water heater, dishwashers and washing machines to maximize efficiency. • *Current Year Inspection Dates:* _____	3	☐ Yes
45. When cleaning portable HVAC or PTAC units with chemicals/cleaning solutions, cleaning is performed on a porous surface such as grass.	3	☐ Yes
46. Innovative Best Practice • *Please describe any additional Water Conservation-related practice implemented. Submit any supporting documentation.* _____		☐ Yes
Water Conservation Point Total		

Energy Efficiency:

Check ONLY if the practice is implemented in at least 50 percent of the facility, or at least 50 percent of the time. Documentation will be required to verify practices noted in *italics*. For assistance, see Best Management Practices and Technical Assistance.

Reducing energy use provides your accommodation facility with significant cost savings. It also decreases your contribution of harmful air emissions such as smog, greenhouse gases, sulfur dioxide, hydrocarbons and particulate matter. Lodging facilities have extensive opportunities to reduce energy use and the associated costs through choosing efficient equipment, limiting the amount of energy used at any one time, making routine energy saving choices and keeping equipment in optimum condition.

The Energy Efficiency section assesses the energy impact of equipment and current practices at your facility. Key elements include:

- Energy efficient choices for lighting, appliances, office equipment and heating and cooling.
- Energy efficiency efforts such as controlling periodic and sporadic energy needs and optimizing thermostat settings.
- Preventative equipment maintenance such as planned repairs and equipment overhauls; and
- Building upkeep incorporating routine energy saving activities.

A minimum of 54 points must be obtained from this section in order for it to be considered complete and satisfied.

1. Have your local utility or other provider conduct an energy assessment. • *Date Completed:* _____ • *Conducted by:* _____	4	☐ Yes
2. Have a preventative maintenance schedule to clean and maximize efficiency in appliances. • *Submit current schedule.*	4	☐ Yes
3. **Indicate which items are inspected on a routine schedule:**		
• HVAC equipment: Most recent inspection date: _____	4	☐ Yes
• Ventilation systems: Most recent inspection date: _____	3	☐ Yes
• Lighting timers and sensors: Most recent inspection date: _____	3	☐ Yes
• Refrigerators: Most recent inspection date: _____	3	☐ Yes
• Stoves, fryers: Most recent inspection date: _____	3	☐ Yes
• Pool equipment: Most recent inspection date: _____	3	☐ Yes
• Laundry exhaust vents: Most recent inspection date: _____	3	☐ Yes
• Grounds equipment: Most recent inspection date: _____	3	☐ Yes
• Vehicles: Most recent inspection date _____	3	☐ Yes

4. Track energy usage. • Documentation must be entered in Baseline Performance of Application.	4	☐ Yes
5. **Use energy efficient lighting (compact fluorescent bulbs, LEDs, and/or T-8 fluorescent tubes). Indicate the areas where energy efficient lighting is used:**		
• Lobby and reception area	4	☐ Yes
• Hallways	4	☐ Yes
• Public restrooms	4	☐ Yes
• Offices	3	☐ Yes
• Restaurants / Bar	3	☐ Yes
• Kitchen	2	☐ Yes
• Conference areas	3	☐ Yes
• Guestrooms	3	☐ Yes
• Exterior lighting including parking	4	☐ Yes
• Exit lighting	4	☐ Yes
6. Use programmable thermostats for HVAC. • *Manufacturer:* _____ • *Product number:* _____	5	☐ Yes
7. Use sensors or timers on outdoor lighting. • *Manufacturer:* _____ • *Product number:* _____	4	☐ Yes
8. Install Low E, Thermal-rated or tinted windows. • *Percentage of property with energy efficient windows:* _____	5	☐ Yes
9. Use on-site renewable energy power source (solar panels, solar hot water heater, other). • *Enter items used:* _____	5	☐ Yes
10. Purchase at least 5% green power or renewable energy certificates from a green power generation source in Florida. • *Green Power Source:* _____ • *Date:* _____	5	☐ Yes
11. Implement key card technology to control guest room energy use, i.e. when card is not in the slot, lights and other power sources automatically turn off. • *Key card supplier:* _____	5	☐ Yes

Use of ENERGY STAR® products from each category:		
Front of House Equipment		
12. Printers • *Manufacturer:* _____ • *Product number:* _____	3	☐ Yes
13. Televisions • *Manufacturer:* _____ • *Product number:* _____	3	☐ Yes
14. Copiers • *Manufacturer:* _____ • *Product number:* _____	2	☐ Yes
15. Monitors • *Manufacturer:* _____ • *Product number:* _____	2	☐ Yes
16. Refrigerators • *Manufacturer:* _____ • *Product number:* _____	3	☐ Yes
17. Computers • *Manufacturer:* _____ • *Product number:* _____	2	☐ Yes
18. DVD Players • *Manufacturer:* _____ • *Product number:* _____	2	☐ Yes
Heating/Cooling Equipment		
19. Ceiling Fans • *Manufacturer:* _____ • *Product number:* _____	2	☐ Yes
20. Boilers/Water Heaters • *Manufacturer:* _____ • *Product number:* _____	4	☐ Yes
21. Dehumidifiers • *Manufacturer:* _____ • *Product number:* _____	3	☐ Yes

22. Ventilation • *Manufacturer:* _____ • *Product number:* _____	3	☐ Yes
23. Programmable Thermostats • *Manufacturer:* _____ • *Product number:* _____	4	☐ Yes
24. Central AC Units • *Manufacturer:* _____ • *Product number:* _____	4	☐ Yes
Laundry and Kitchen Equipment		
25. Washing Machines • *Manufacturer:* _____ • *Product number:* _____	4	☐ Yes
26. Refrigerator • *Manufacturer:* _____ • *Product number:* _____	3	☐ Yes
27. Freezers • *Manufacturer:* _____ • *Product number:* _____	4	☐ Yes
28. Ice machine • *Manufacturer:* _____ • *Product number:* _____	4	☐ Yes
29. Dishwashers • *Manufacturer:* _____ • *Product number:* _____	3	☐ Yes
30. Steam cookers • *Manufacturer:* _____ • *Product number:* _____	3	☐ Yes
31. Hot food holders • *Manufacturer:* _____ • *Product number:* _____	3	☐ Yes

32. Fryers • *Manufacturer:* _____ • *Product number:* _____	3	☐ Yes
Other appliances		
33. Vending machines • *Manufacturer:* _____ • *Product number:* _____	3	☐ Yes
34. In room coffee makers • *Manufacturer:* _____ • *Product number:* _____	2	☐ Yes
35. Public restroom hand dryers • *Manufacturer:* _____ • *Product number:* _____	3	☐ Yes
36. Energy Management System • *Manufacturer:* _____	5	☐ Yes
37. Use A/C units with a SEER Rating of 12 or higher.	4	☐ Yes
Energy saving practices		
38. Weather stripping and caulking on doors and windows replaced.	3	☐ Yes
39. Air conditioning air inlet and vents kept unobstructed.	3	☐ Yes
40. Controlled HVAC demand usage in the hallways and common areas.	3	☐ Yes
41. Windows closed when HVAC system operating.	3	☐ Yes
42. Effective use of shade to reduce cooling costs.	3	☐ Yes
43. Ducts and registers kept clear.	3	☐ Yes
44. Lighting and appliances off in guestrooms.	3	☐ Yes
45. Drapes opened to clean with natural light.	3	☐ Yes
46. Refrigerator coils kept clean.	3	☐ Yes
47. Kitchen equipment turned down during non-peak hours.	2	☐ Yes
48. Oven preheated times minimized.	2	☐ Yes
49. Wash linens in cold water when possible and appropriate.	4	☐ Yes
50. Lint filters emptied regularly.	3	☐ Yes
51. Pool cover or chemical thermal cover used.	4	☐ Yes
52. Hot tub covered when not in use.	4	☐ Yes
53. Pool/hot tub/sauna on timers.	4	☐ Yes
54. Vinyl curtains on loading docks.	3	☐ Yes
55. Use of natural ambient light whenever possible.	3	☐ Yes
56. Window coverings in recently cleaned rooms left 50% open.	4	☐ Yes

57. Installation of green roofs and walls.	5	☐ Yes
58. Real time energy monitoring.	5	☐ Yes
59. Periodic thermal imaging.	5	☐ Yes
60. Onsite electrical generation.	5	☐ Yes
Transportation		
61. Encourage guests and staff to walk, use public transport, bicycle to and from the facility, providing maps, schedules and/or reduced rate transit passes.	3	☐ Yes
62. Provide bicycles for guest rental or use.	3	☐ Yes
63. Provide preferred parking locations for guests and staff driving fuel efficient vehicles.	3	☐ Yes
64. Encourage and reward staff for carpooling or using public transportation.	3	☐ Yes
65. Use of hybrid -electric, biodiesel, ethanol, electric or other non-petroleum based vehicles.	5	☐ Yes
66. Innovative Best Practice • *Please describe any additional Energy Efficiency- related practice implemented. Submit any supporting documentation.*		☐ Yes
Energy Efficiency Point Total		

Indoor Air Quality:

Check ONLY if the practice is implemented in at least 50 percent of the facility, or at least 50 percent of the time. Documentation will be required to verify practices noted in *italics*. For assistance, see Best Management Practices and Technical Assistance.

Over the past few decades, clean air practices have become increasingly important in progressive hotel management. These changes have not only led to an increase in energy efficiency and reduced exposure to health-related liabilities but have also created positive impacts on the "bottom line" and higher employee and guest satisfaction. Indoor pollution sources that release gases or particles into the air are the primary causes of indoor air quality problems. According to the U.S. Environmental Protection Agency (EPA), indoor air quality can be up to 10 times worse than the quality of outside air. There are many sources of indoor air pollution. These include the combustion of fuels such as oil, gas, kerosene, coal and wood; building materials and furnishings as diverse as deteriorating insulation, wet or damp carpets, and furnishings made of certain pressed wood products; products for cleaning and maintenance; central heating and cooling systems and humidification devices.

A minimum of **21** points must be obtained from this section in order for it to be considered complete and satisfied.

1. Use at least two, environmentally preferable cleaners that are biodegradable and do not contain NTA (nitrilotriacetic acid), chlorine bleach or phosphates *or* two cleaners that have a third party green cleaning designation. • *Enter products & brands:* _____	5	☐ Yes
2. Use air filters with a Minimum Efficiency Reporting Value (MERV) of 8 or better. • *Manufacturer:* _____ • *Submit receipt or proof- of- purchase.*	5	☐ Yes
3. Clean all air handler units and coils, at minimum, annually. Keep and follow a preventative maintenance schedule and a record of activities. • *Submit current schedule.*	4	☐ Yes
4. Properly label and store all chemicals.	3	☐ Yes
5. No visible mold or mildew is present.	4	☐ Yes
6. Ceiling tiles, wallpaper, shower curtain or other absorbent surfaces are routinely monitored for signs of mold and replaced as necessary.	3	☐ Yes
7. Waterlogged carpets are immediately lifted and dried, or immediately replaced.	3	☐ Yes
8. Maintain HVAC inspection records for the following: ☐ Mold and bacteria ☐ Obstructions to air flow ☐ Clean drip pans • *Submit copy of current records*	5	☐ Yes
9. Drain condensate or any liquid from HVAC maintenance to sanitary sewer; not to stormwater drain. (Only storm water is permitted to go to the stormwater drain or retention pond.)	4	☐ Yes
10. Maintain a relative humidity between 35% and 55% throughout the facility.	3	☐ Yes

11. Use an integrated pest management system to control indoor pests. • *Enter vendor:* _____	3	☐ Yes
12. Vent all exhaust fans to outside.	3	☐ Yes
13. Use Dehumidifiers.	3	☐ Yes
14. Properly ventilate and filter all smoking guest rooms. Minimize or eliminate using deodorizers to mask smells.	3	☐ Yes
15. Facility is 100% smoke-free indoors, including all guest rooms.	4	☐ Yes
16. Ensure high moisture areas, such as kitchen and laundry are well ventilated.	3	☐ Yes
17. Use low or No-VOC paints and finishes. • *Enter brand:* _____ • *VOC content:* _____	3	☐ Yes
18. Regularly conduct tests for gases such as carbon monoxide and radon, and materials such as lead paint and asbestos. • *Enter hazardous materials and gases tested:* _____	4	☐ Yes
19. Eliminate or minimize use of ozone depleting chlorofluorocarbons (CFCs) such as refrigerants and aerosols. Existing CFC products are recovered, recycled and properly disposed.	4	☐ Yes
20. Innovative Best Practice • *Please describe any additional Indoor Air Quality-related practice implemented. Submit any supporting documentation.* _____		☐ Yes
Indoor Air Quality Point Total		

Verification and Authorization

Florida Green Lodging Designation requires the lodging facility to verify regulatory compliance with the Florida Department of Environmental Protection (DEP) and to authorize posting its environmental practices on the Florida Green Lodging Program Web site. Please indicate agreement by completing the following:

_____ *(Facility Name)* is in compliance with all applicable federal, state and local environmental rules and regulations; allows its environmental practices to be posted on the Florida Green Lodging Web site; and makes its practices available to the public, guests and others upon request.

☐ As authorizing agent for this property, I accept the Terms and Conditions of designation.

☐ No false or misleading information is presented in this application.

☐ My property is ready for designation.

_____ _____

General Manager Date

Thank you for your commitment to conserve Florida's natural resources through your participation in the Florida Green Lodging Program. The Florida Green Lodging Program will review your application and documentation, and will notify you of your designation status.

IMPORTANT NOTE: Once you completed the application, please save the form as a .pdf using the Save As function. Attach application to an e-mail and send to GreenLodging@dep.state.fl.us. Be sure to include any additional documentation required in the above sections. Attachments should be in .pdf form, titled clearly with your property's name and documents should be no larger than 250 kb in size. Your application will not be reviewed for designation without the supporting documents.

If you have any questions, please contact the Florida Green Lodging Program at 850-245-2100 or by email at GreenLodging@dep.state.fl.us

MAKE SURE TO SAVE A COPY OF THIS APPLICATION BEFORE SUBMITTING

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Appendix Two FGLP Application Results

Results: Hotel Profile on the Florida Green Lodging Program Application (p. 3)

Property Information

The Florida Green Lodging Program collected 98 designation applications in January 2014 with 81 applications containing all of the requested information. The following data were extracted from the 81 completed applications and compiled manually by the researcher.

The annual results for all certified properties are:

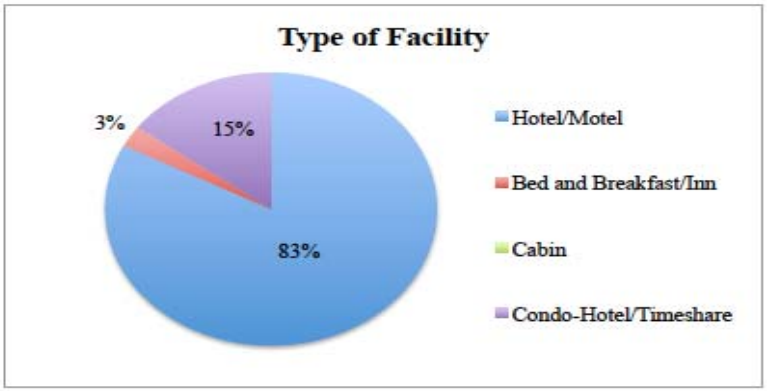
Type of Facility
Hotel/Motel: 82.7% Condo-Hotel/Timeshare: 14.8%
Bed and Breakfast: 2.5% Cabin: 0%

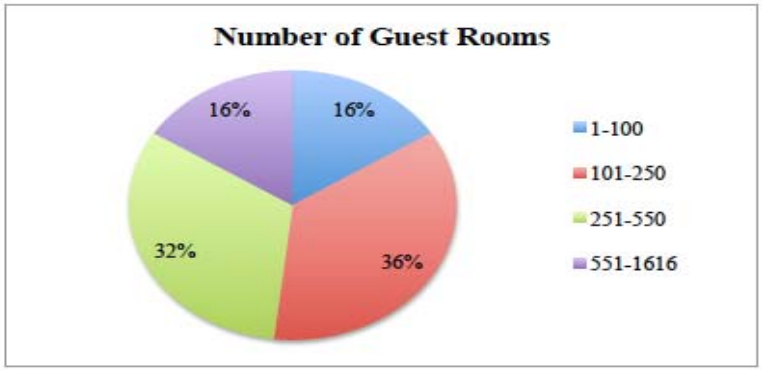
Ownership of Facility
Corporate: 30.9% Management Company: 14.8%
Franchise: 25.9% Independent/Partnership: 28.8%

Total Building Square Footage
Mean: 376,418 Minimum: 4,340
Median: 175,188 Maximum: 3,280,000
Mode: 50,000

Number of Guest Rooms
Mean: 346 Minimum: 9
Median: 227 Maximum: 1616
Mode: 122

Total Guest Room Square Footage
Mean: 191,016 Minimum: 3,600
Median: 98,500 Maximum: 1,521,458
Mode: 150,000





Results: Hotel Profile on the Florida Green Lodging Program Application (p. 3)

Meeting/Conference Facilities

Meeting Space: 82.7%
No Meeting Space: 17.3%

Total Conference Square Footage

Mean: 30,990 Minimum: 0
Median: 3,810 Maximum: 560,000
Mode: 0

On-Property Restaurant(s)

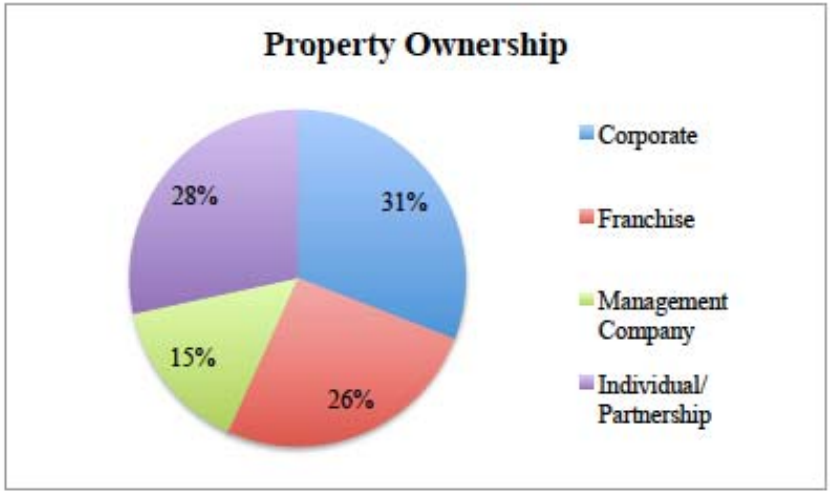
Restaurant: 76.5%
No Restaurant: 23.5%

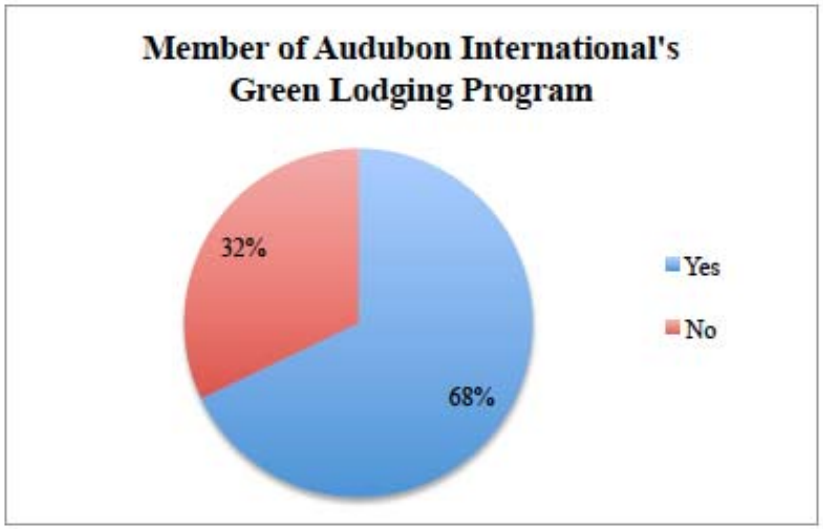
Number of Restaurants

0: 23.5
1: 39.5%
2: 12.3%
3: 12.3%
4: 2.5%
5: 3.7%
6: 1.2%
8: 1.2%
9: 2.5%
12: 1.2%

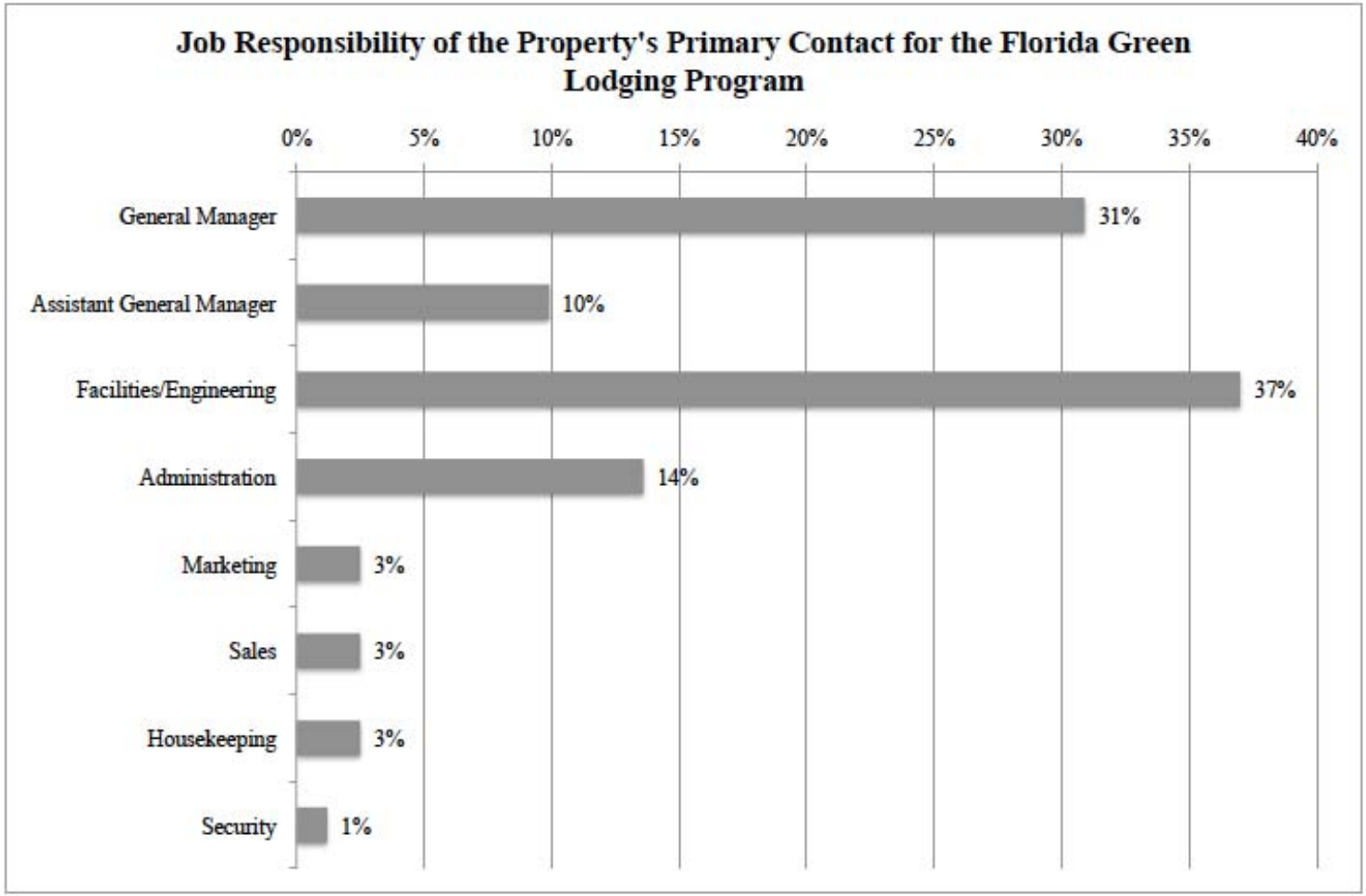
Member of the Audubon International's Green Lodging Program

Member: 67.9%
Non-Member: 32.1%





Results: Hotel Profile on the Florida Green Lodging Program Application (p. 3)



Results: Baseline Environmental Performance Data on the Florida Green Lodging Program Application (p. 4)

SOLID WASTE

The annual results for all certified properties are:

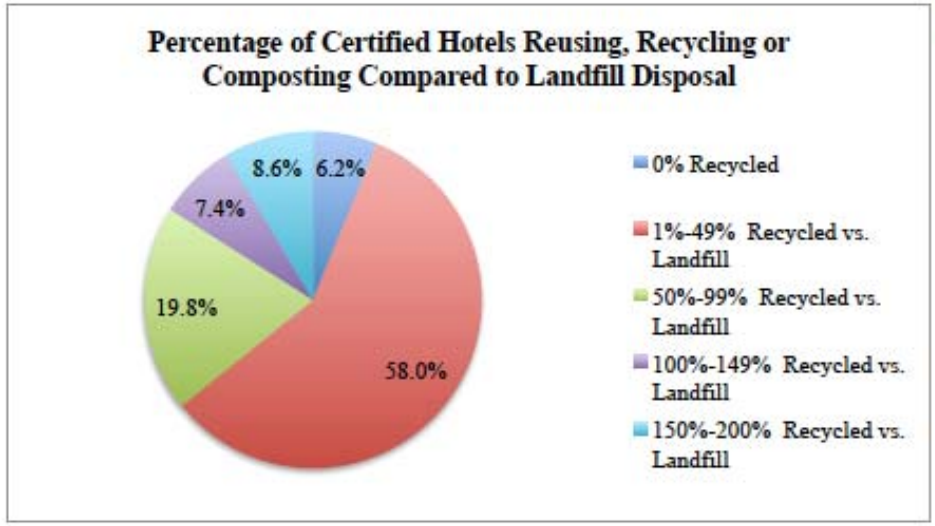
Volume of Waste Sent to the Landfill (in cubic feet)
- Mean: 314,558.9 Minimum: 414
- Median: 34,000 Maximum: 4,124,000
- Mode: 16,848

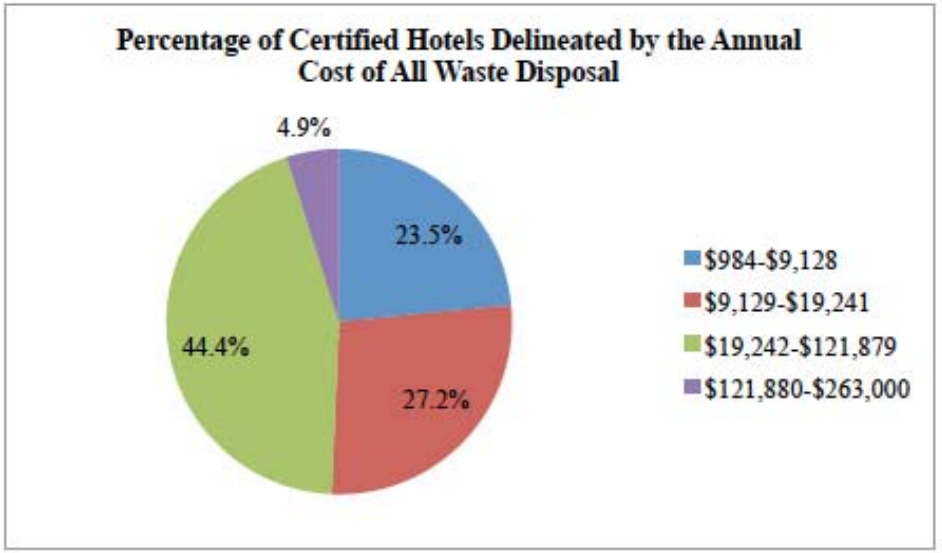
Volume of Waste Being Reused, Recycled or Composted (in cubic feet)
- Mean: 34,405.2 Minimum: 0
- Median: 12,000 Maximum: 333,560
- Mode: 0

Percentage of Waste Being Reused, Recycled or Composted Compared to the Waste Sent to the Landfill
- Mean: 44.81% Minimum: 0%
- Median: 32.02% Maximum: 200%
- Mode: 0%

Total Cost of all Waste Disposal
- Mean: $34,790.16 Minimum: $984.00
- Median: $19,241.00 Maximum: $263,000.00
- Mode: $20,138.00

Total Cost of all Waste Disposal Per Guest Room
- Mean: $116.18 Minimum: $6.35
- Median: $84.93 Maximum: $402.30
- Mode: $60.84





Results: Baseline Environmental Performance Data on the Florida Green Lodging Program Application (p. 4)

WATER

The annual results for all certified properties are:

Volume of Water Used for all Operations, Including Irrigation and Pool (in gallons)

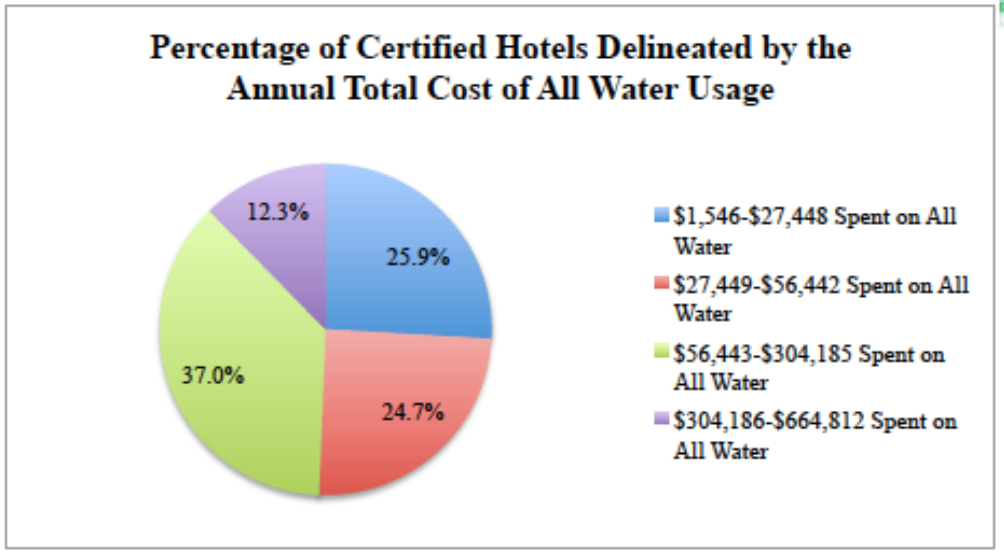
Mean: 19,156,664.3 Minimum: 14,468
Median: 4,250,000 Maximum: 303,763,518
Mode: 14,568,305

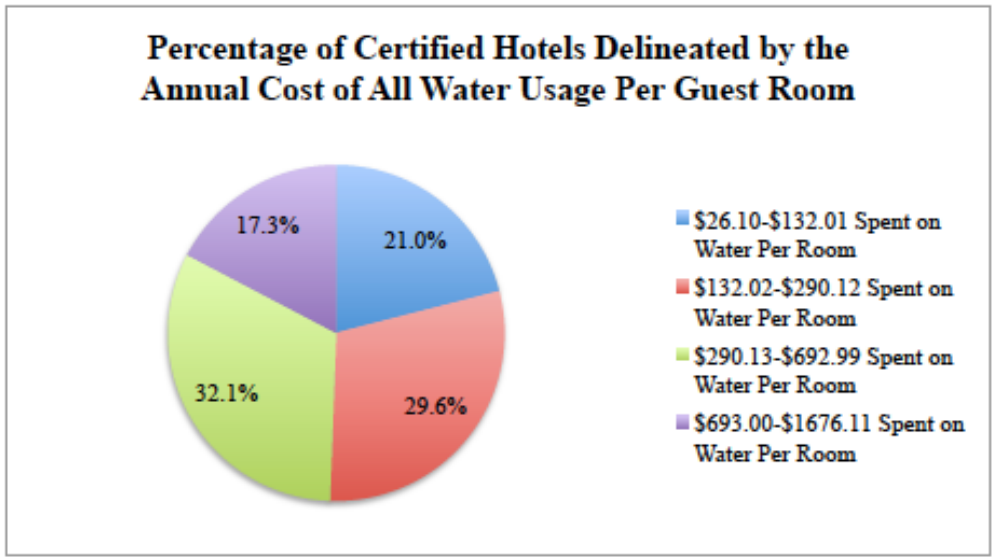
Total Cost of all Water Used

Mean: $128,561.95 Minimum: $1,546.00
Median: $56,442.00 Maximum: $664,812.00
Mode: $34,818.00

Total Cost of all Water Used per Number of Guest Rooms

Mean: $417.22 Minimum: $26.10
Median: $290.12 Maximum: $1676.11
Mode: $439.85





Results: Baseline Environmental Performance Data on the Florida Green Lodging Program Application (p. 4)

ENERGY

The annual results for all certified properties are:

Number of Power/Energy Sources Used

One: 7.4%	Four: 0
Two: 85.2%	Five: 0
Three: 7.4%	Six: 0

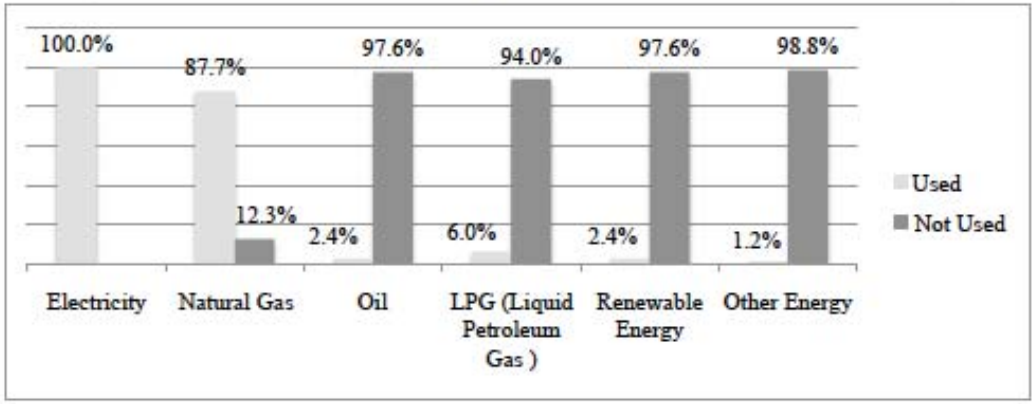
Total Cost of all Energy Used

Mean: $588,270.49	Minimum: $5,135.00
Median: $314,119.00	Maximum: $4,021,020
Mode: $397,007.00	

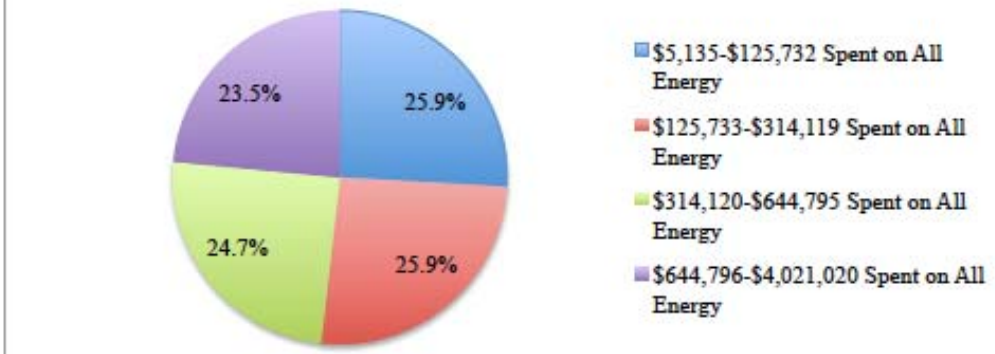
Total Cost of all Energy Used per Number of Guest Rooms

Mean: $1577.28	Minimum: $110.94
Median: $1,211.83	Maximum: $5,825.71
Mode: $1,199.42	

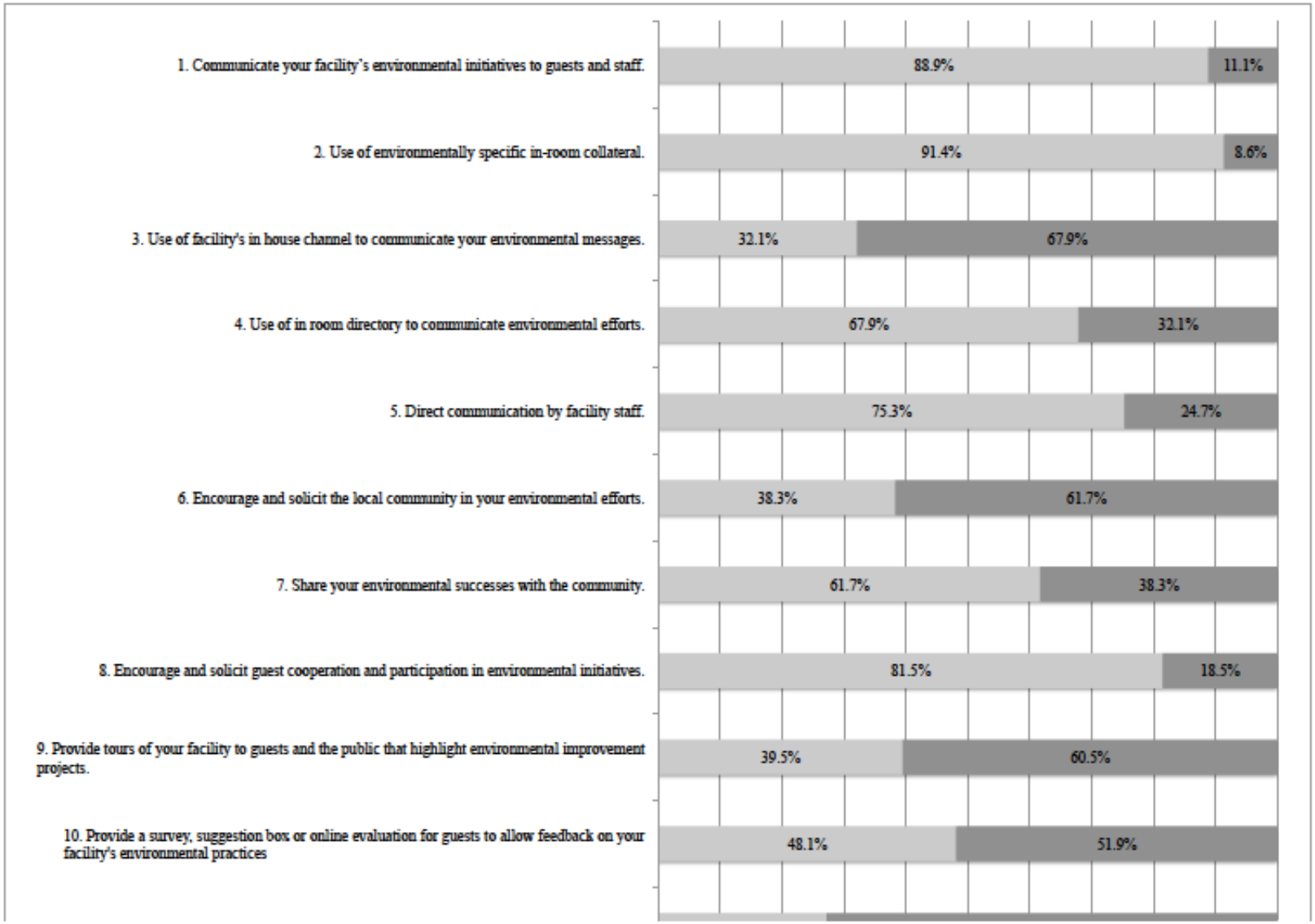
The Energy Sources are Divided into Six Categories, which are Used by the Following Percentage of Properties



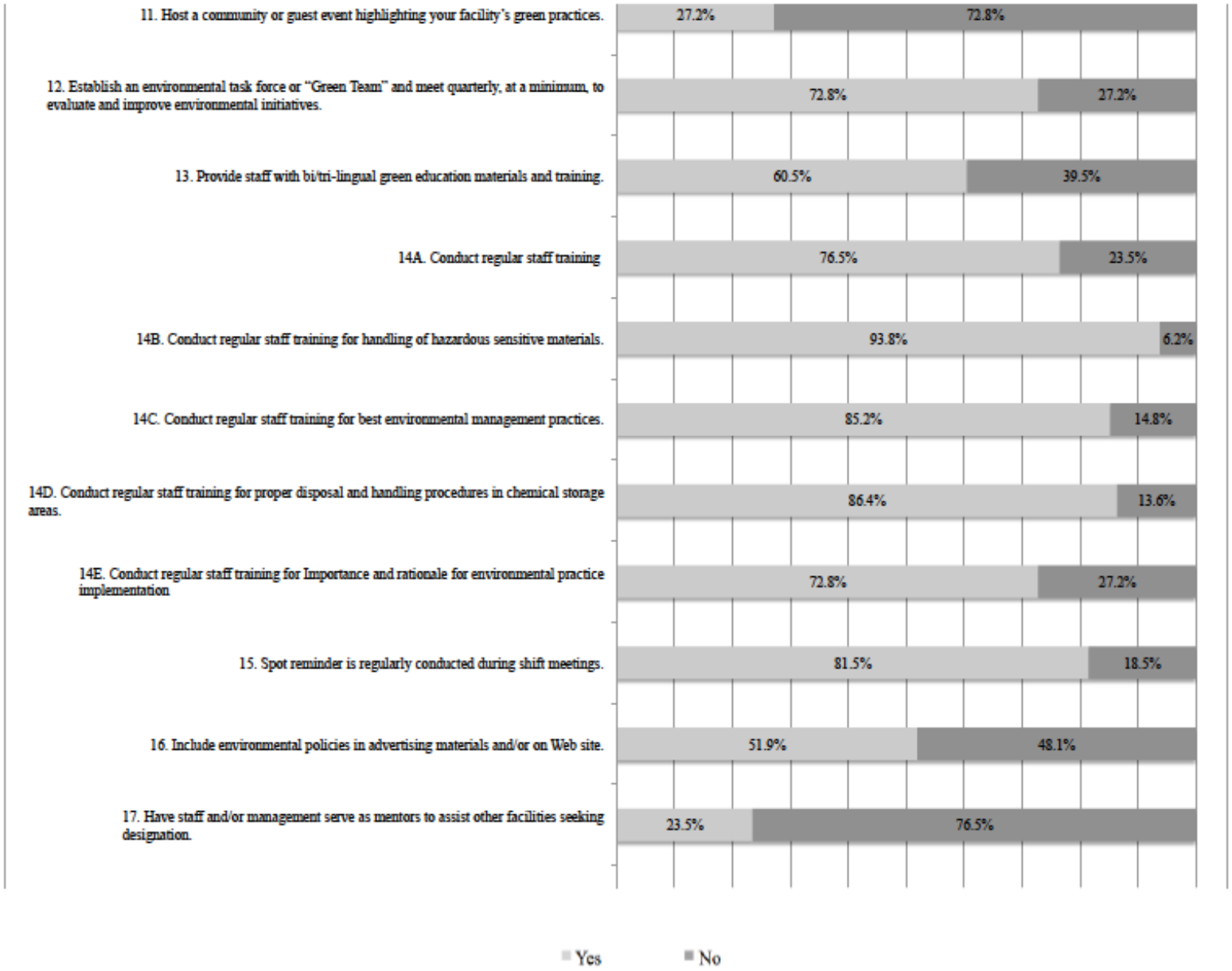
Percentage of Certified Hotels Delineated by the Annual Total Cost of All Energy Used



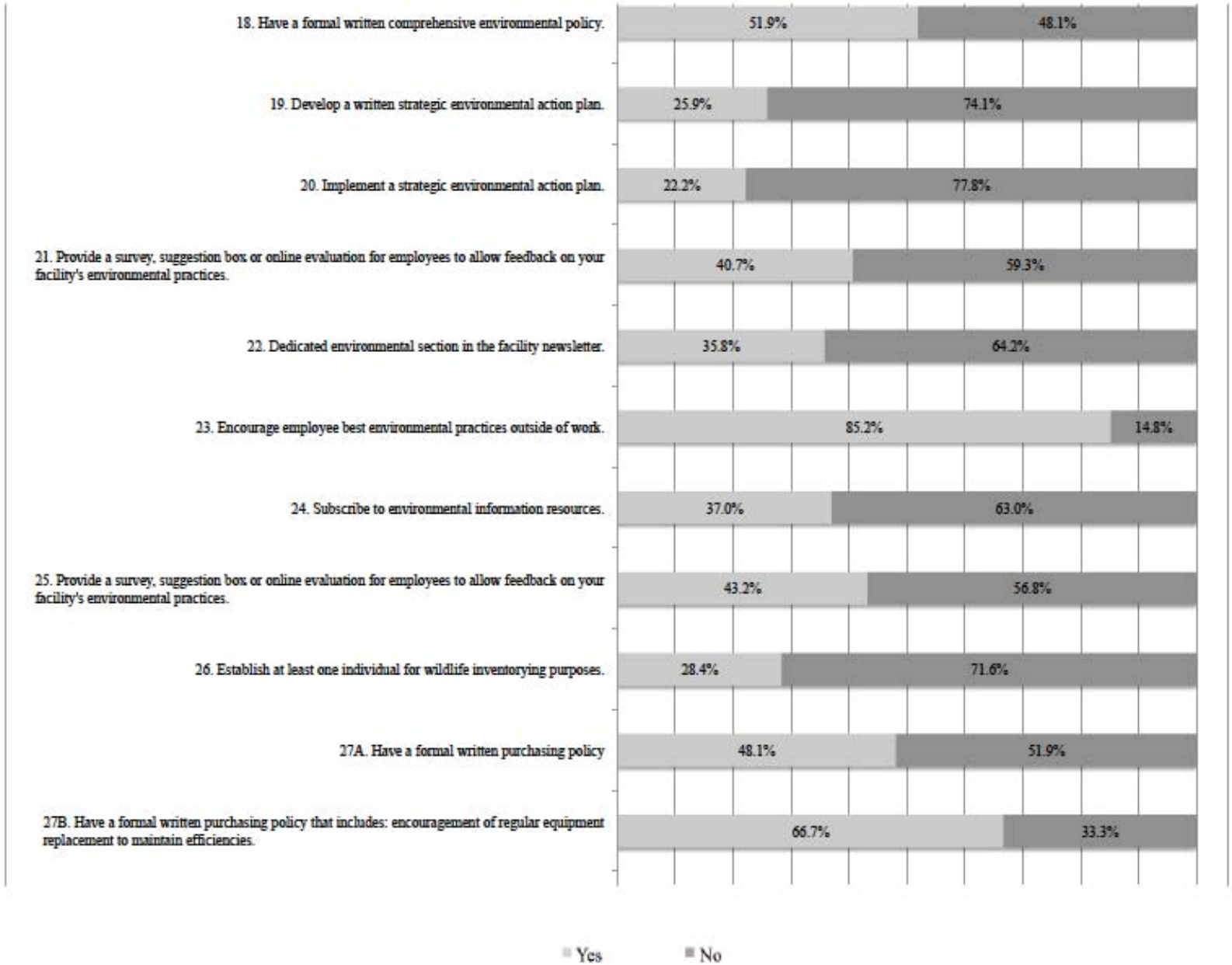
Results: Communications and Education Section on the Florida Green Lodging Program Application (p.5-7)



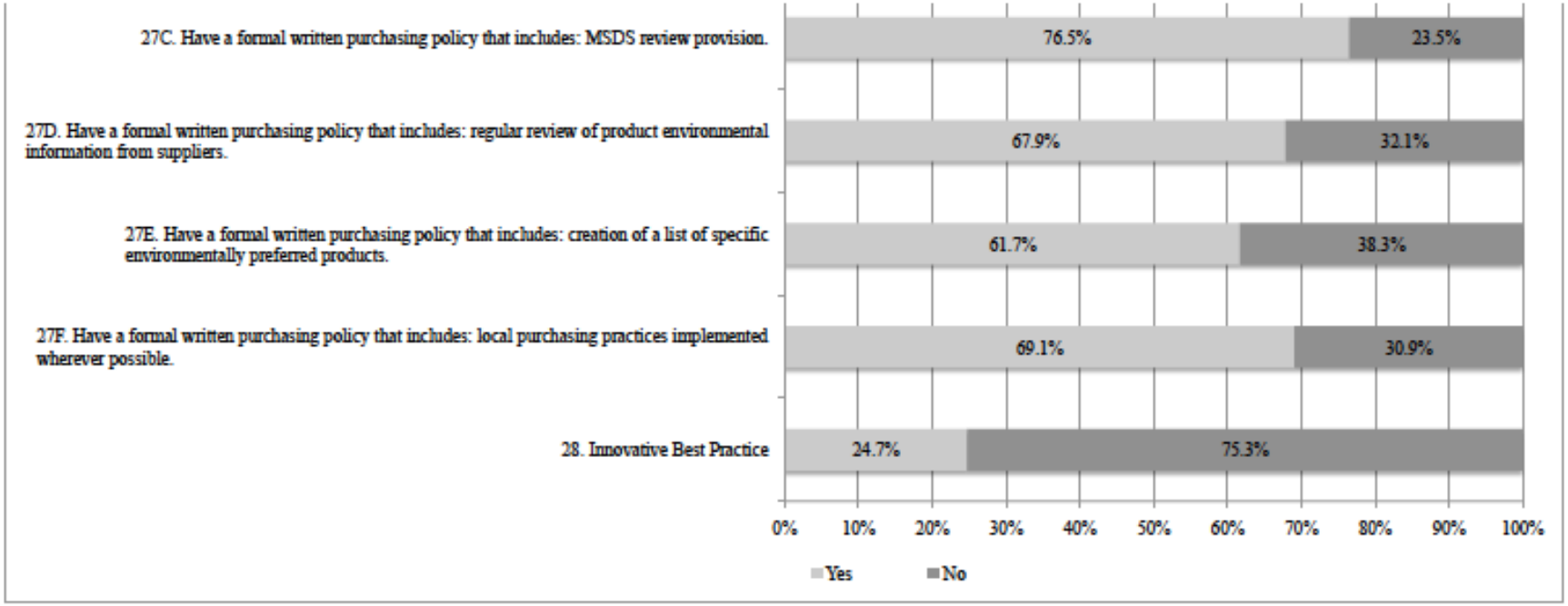
Results: Communications and Education Section on the Florida Green Lodging Program Application (p.5-7)



Results: Communications and Education Section on the Florida Green Lodging Program Application (p.5-7)



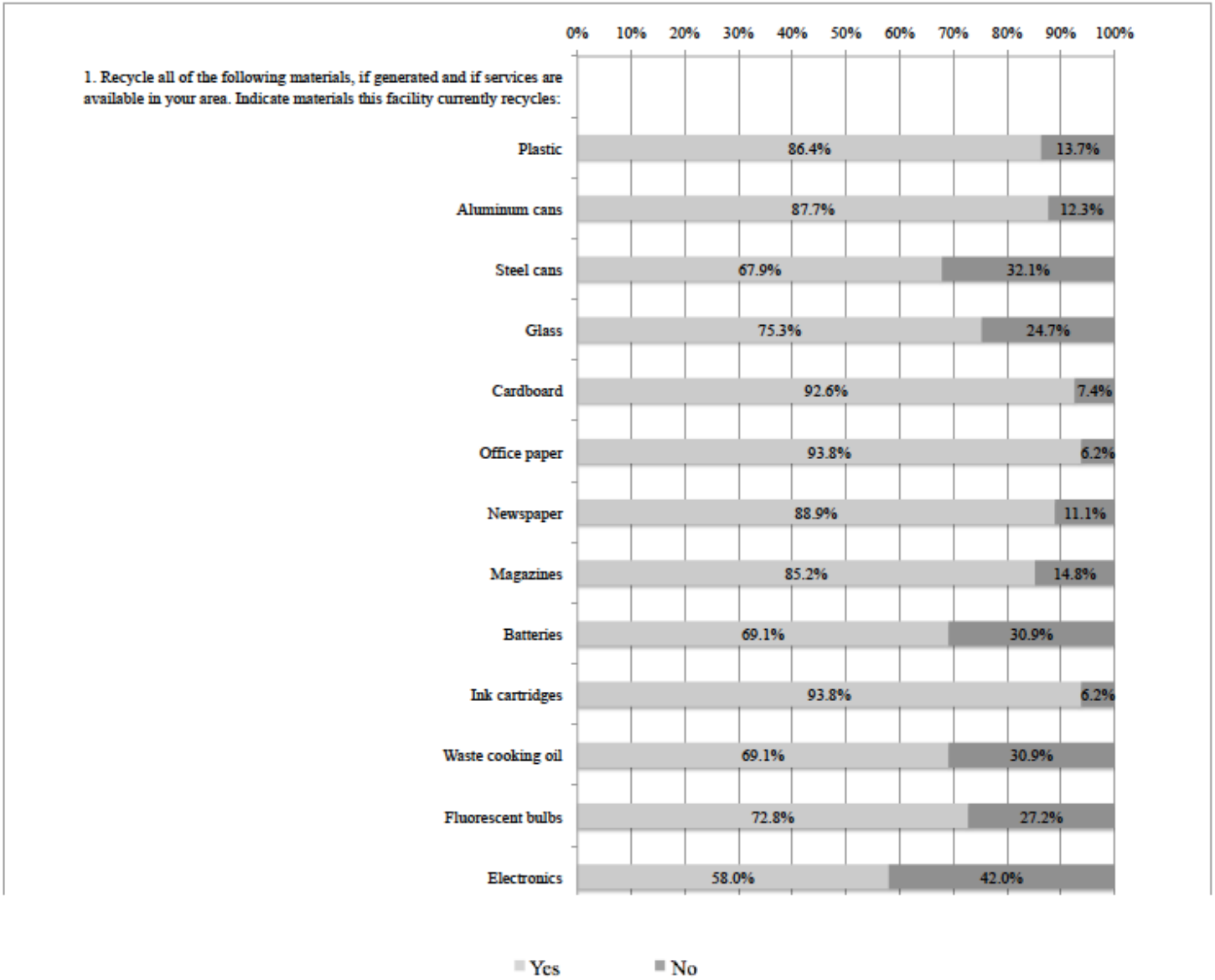
Results: Communications and Education Section on the Florida Green Lodging Program Application (p.5-7)



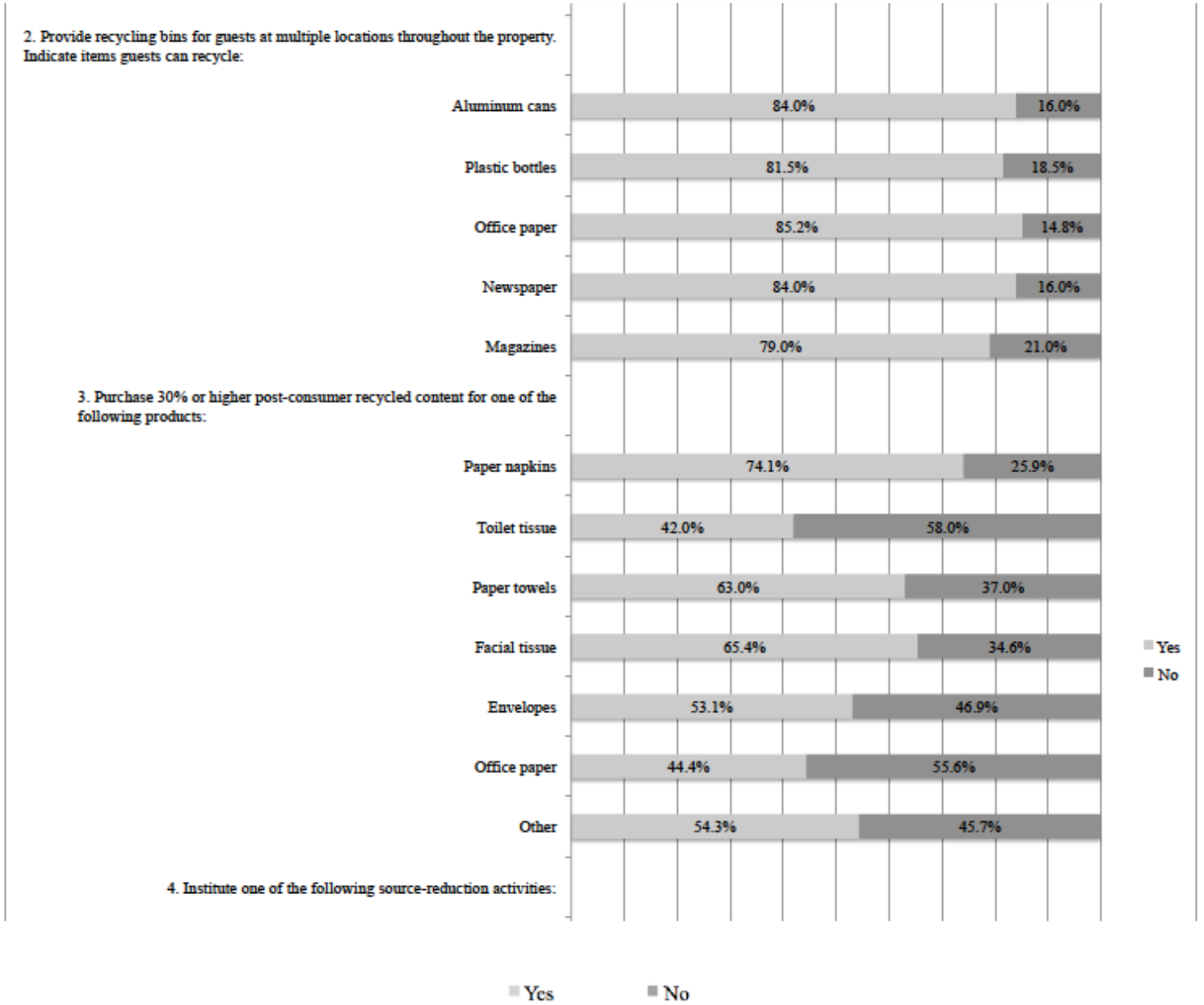
A minimum of 44 points must be obtained from this section in order for it to be considered complete and satisfied.
The results for all certified properties are:

Mean: 75
Median 71
Mode 48

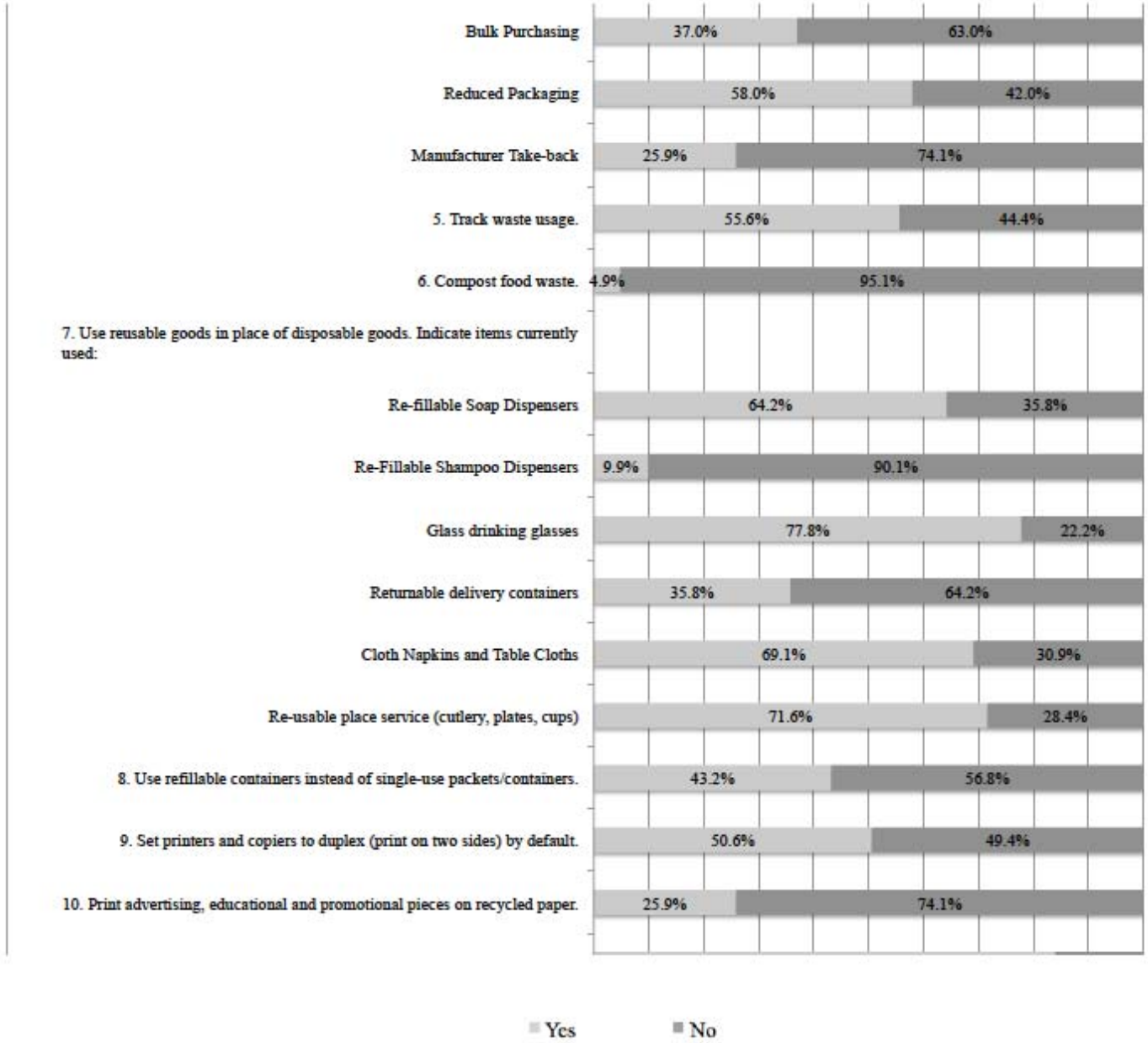
Results: Waste Reduction, Reuse and Recycling Section on the Florida Green Lodging Program Application (p. 8-10)



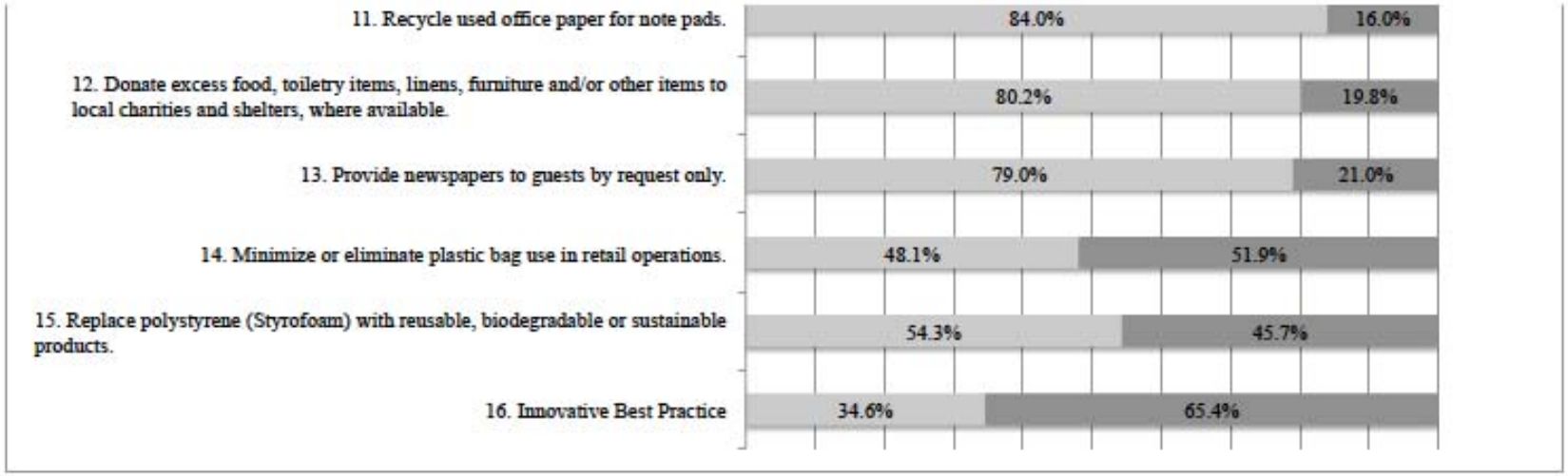
Results: Waste Reduction, Reuse and Recycling Section on the Florida Green Lodging Program Application (p. 8-10)



Results: Waste Reduction, Reuse and Recycling Section on the Florida Green Lodging Program Application (p. 8-10)



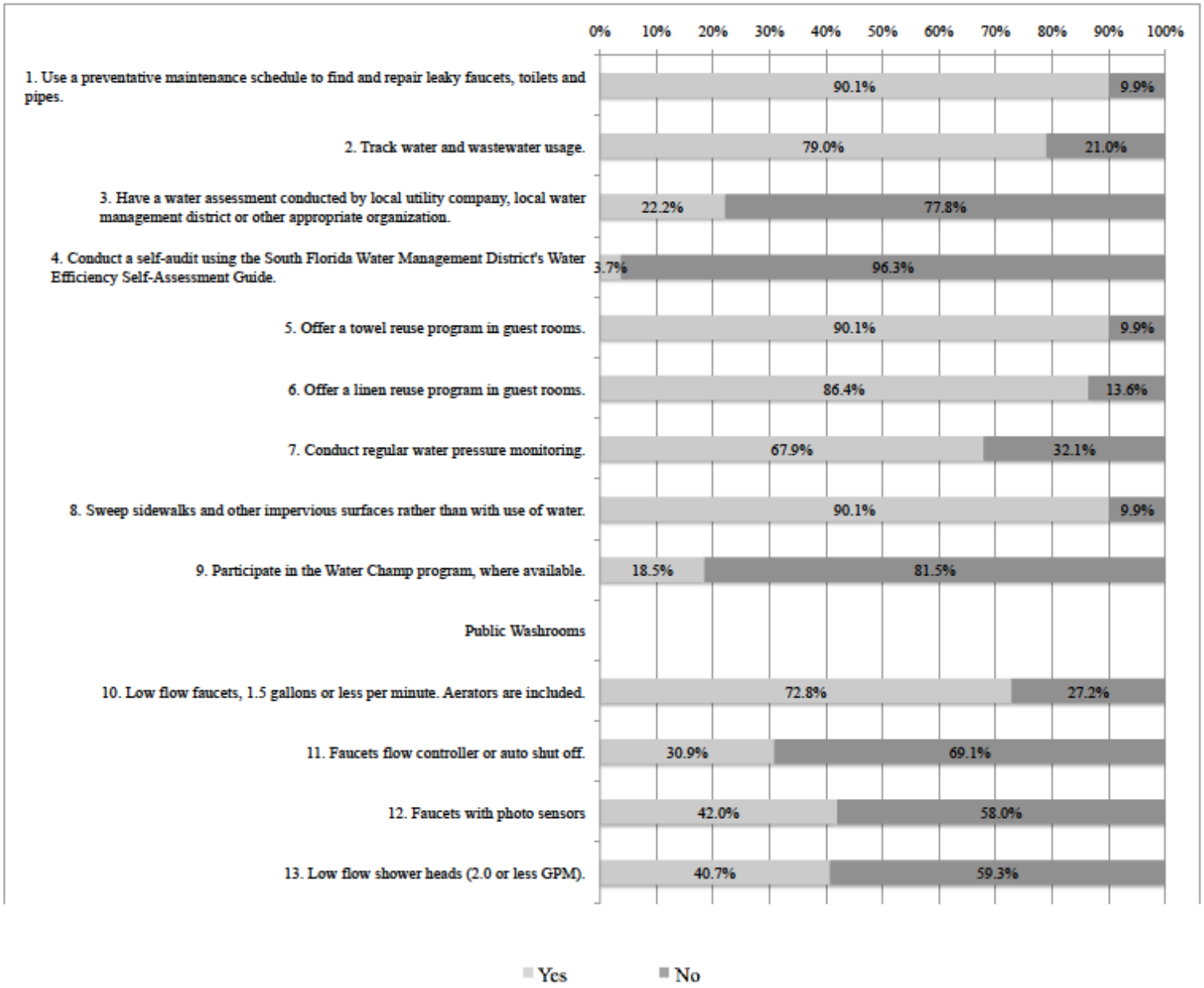
Results: Waste Reduction, Reuse and Recycling Section on the Florida Green Lodging Program Application (p. 8-10)



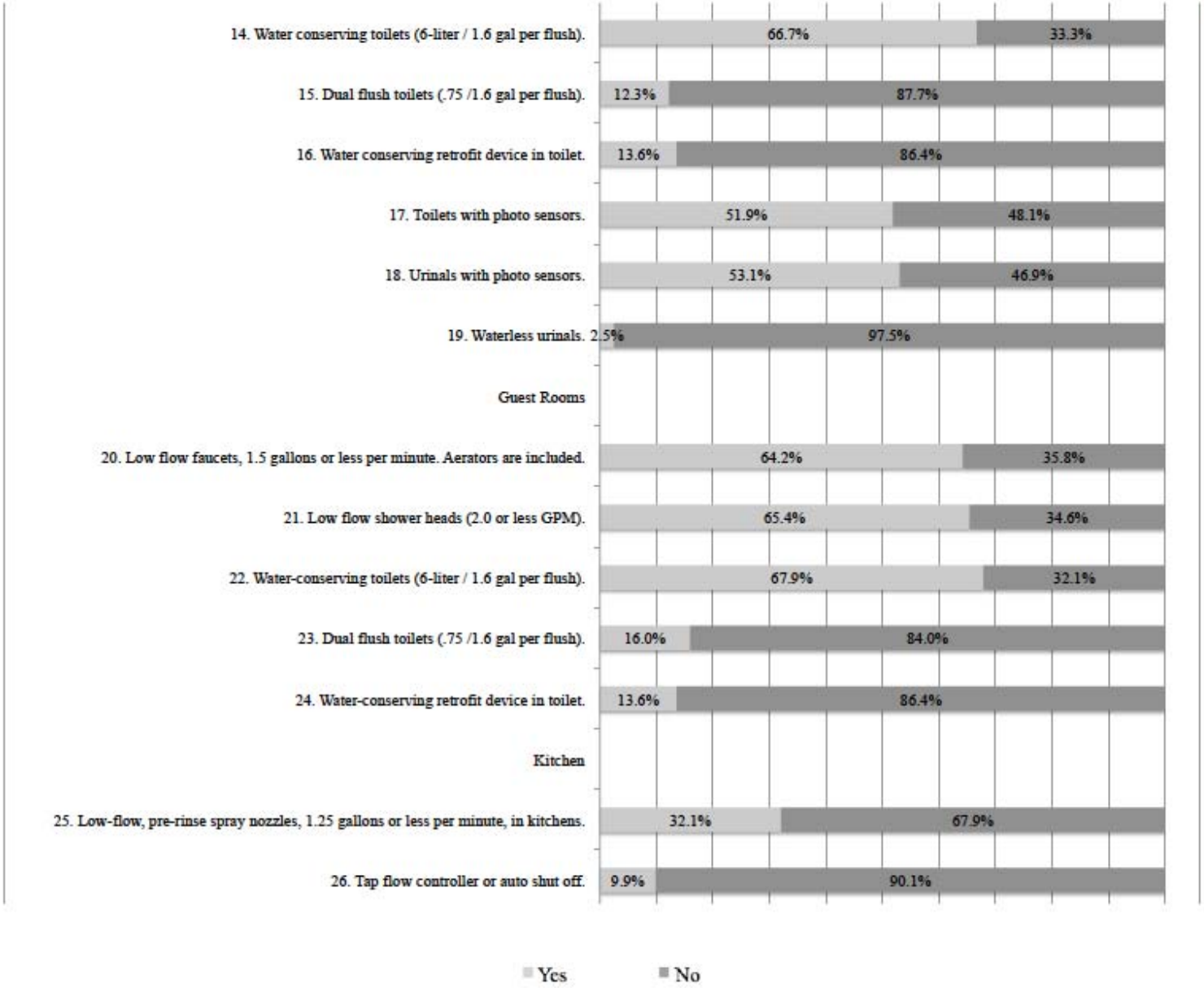
A minimum of 54 points must be obtained from this section in order for it to be considered complete and satisfied.
The results for all certified properties are:

Mean: 103
Median 108
Mode 115

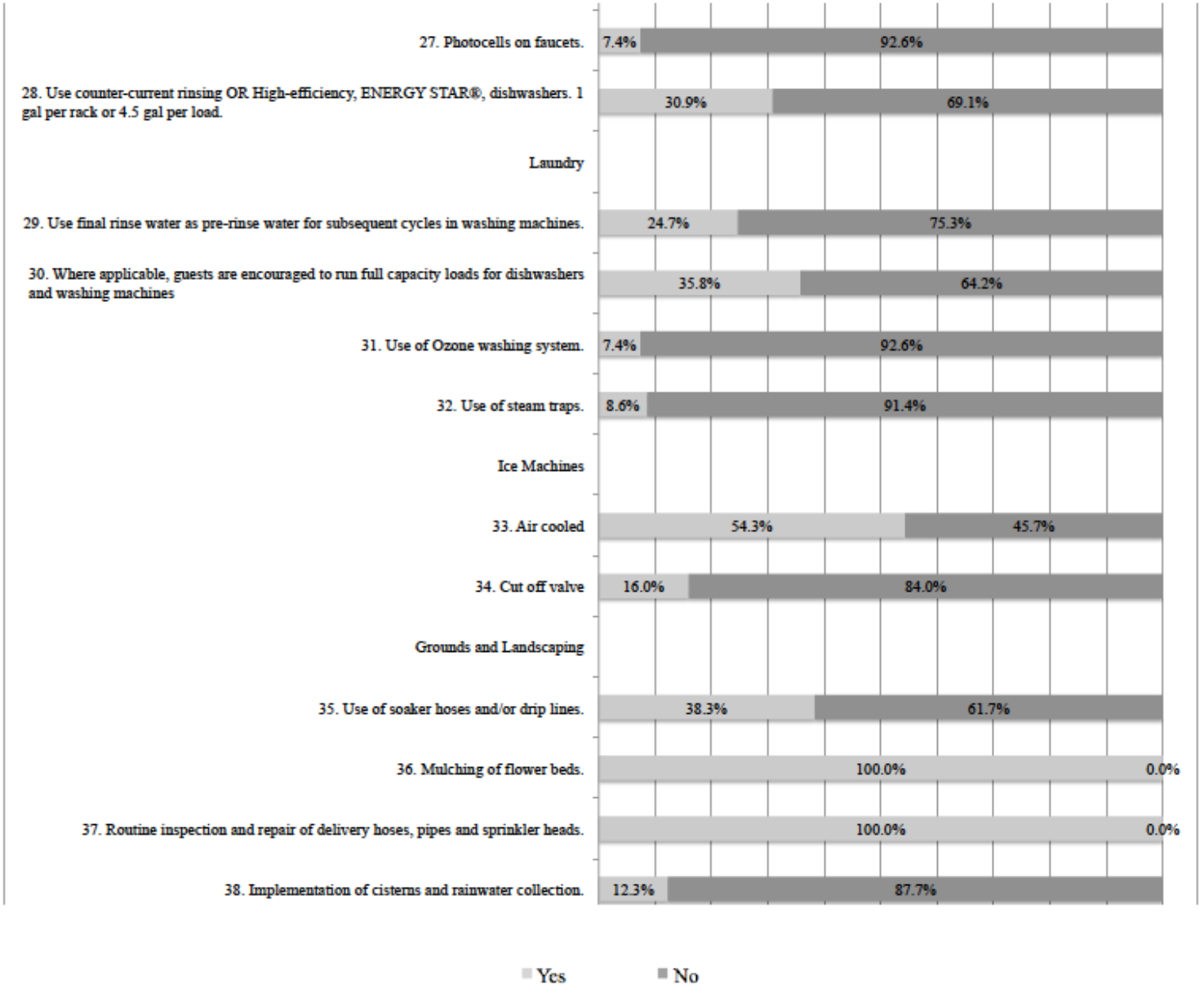
Results: Water Conservation Section on the Florida Green Lodging Program Application (p. 11-14)



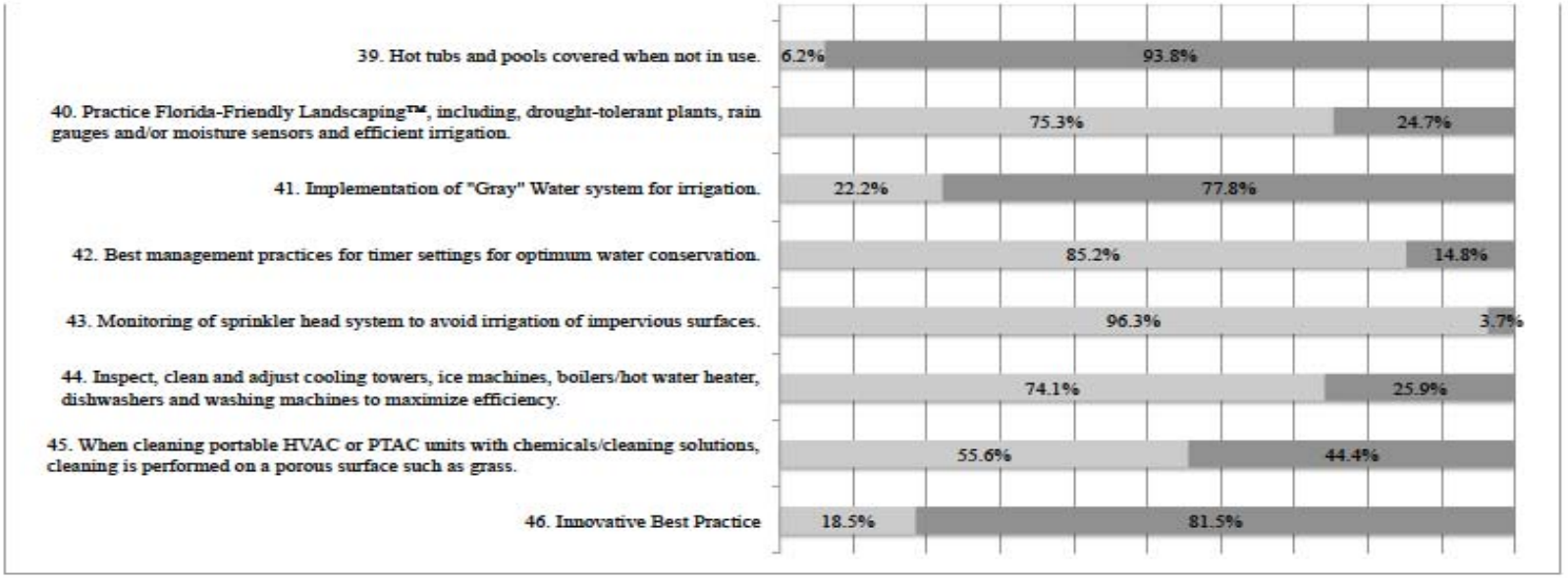
Results: Water Conservation Section on the Florida Green Lodging Program Application (p. 11-14)



Results: Water Conservation Section on the Florida Green Lodging Program Application (p. 11-14)



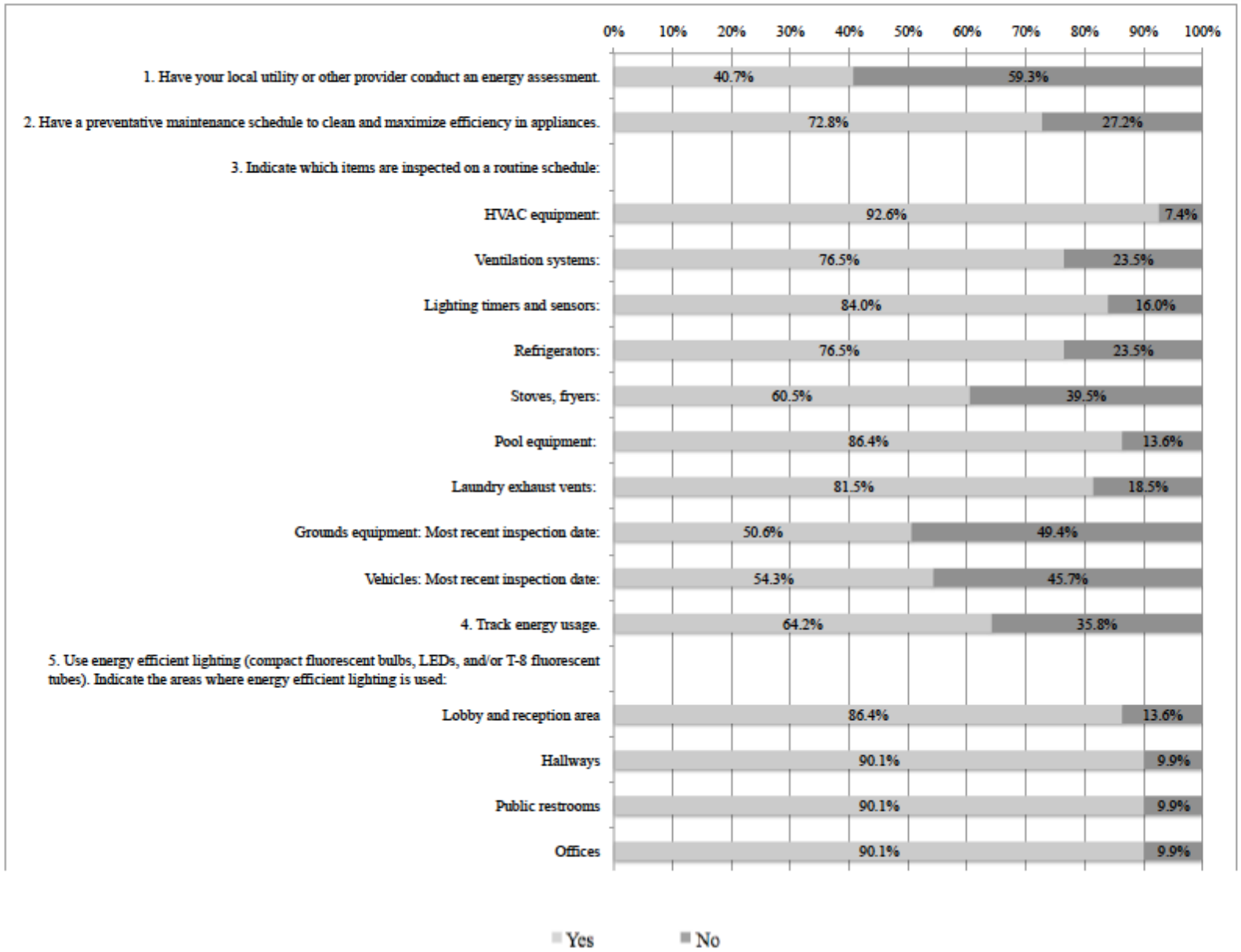
Results: Water Conservation Section on the Florida Green Lodging Program Application (p. 11-14)



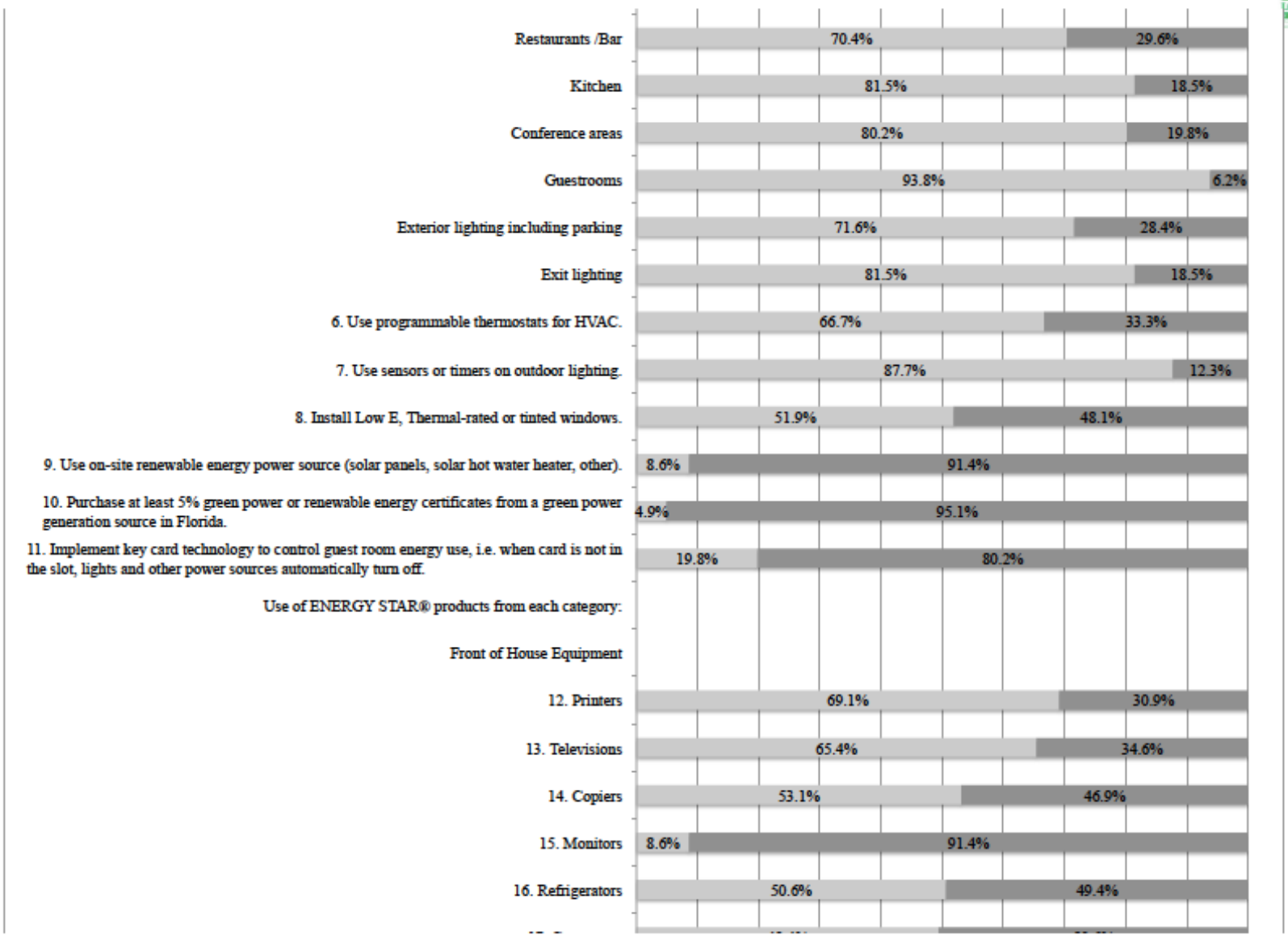
A minimum of 39 points must be obtained from this section in order for it to be considered complete and satisfied.
The results for all certified properties are:

Mean: 68.3
Median 65
Mode 65

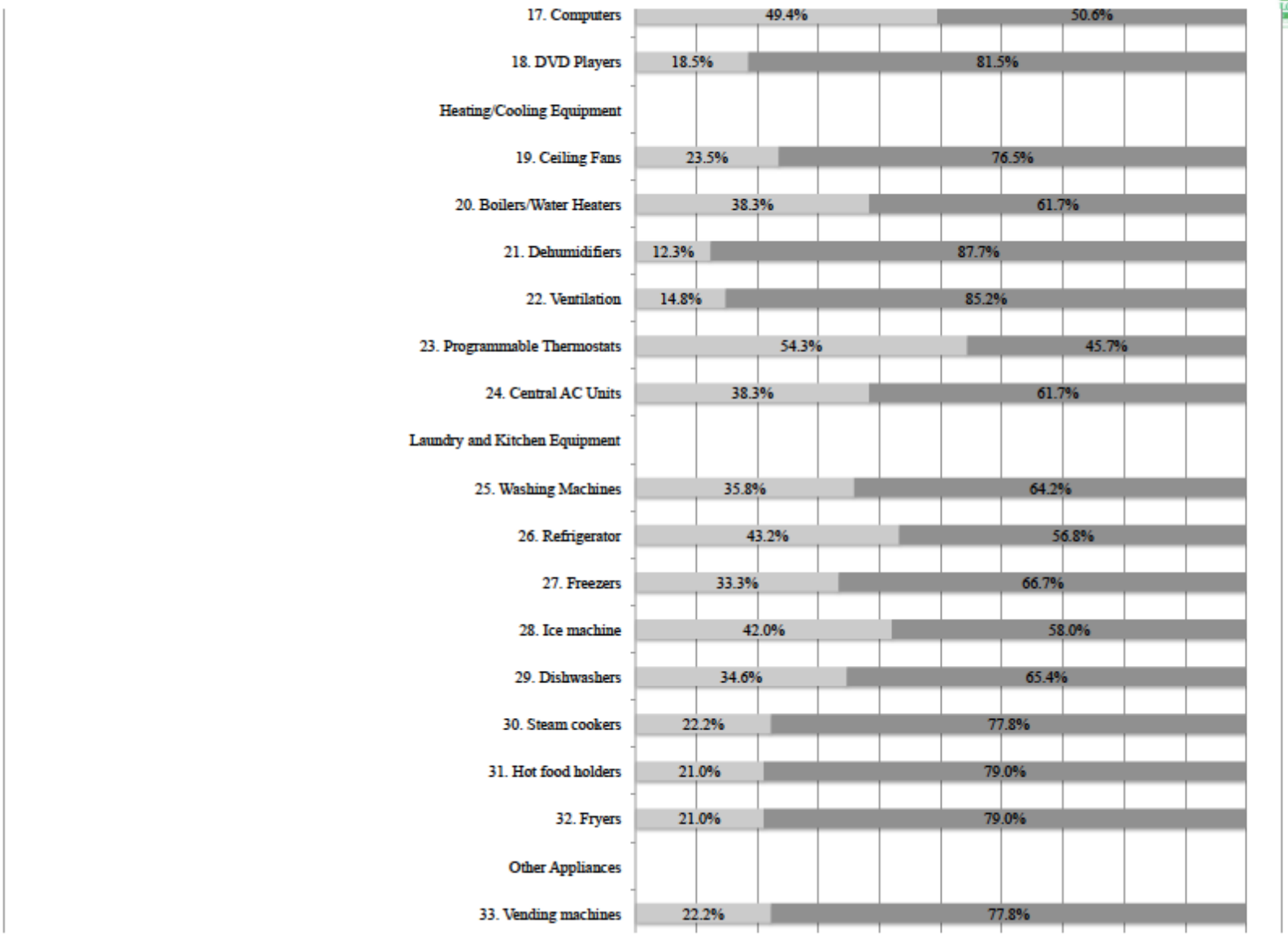
Results: Energy Efficiency Section on the Florida Green Lodging Program Application (p. 15-20)



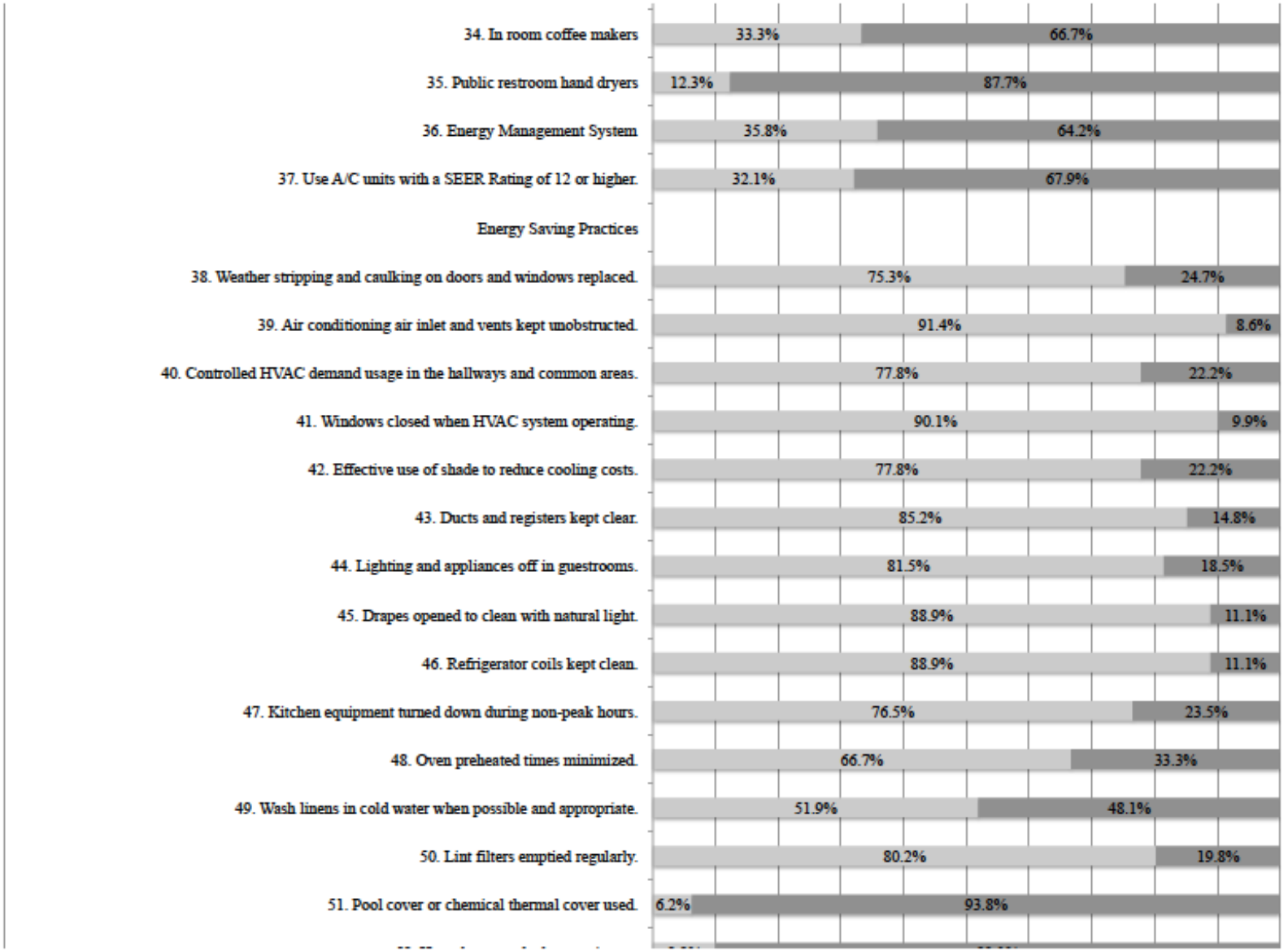
Results: Energy Efficiency Section on the Florida Green Lodging Program Application (p. 15-20)



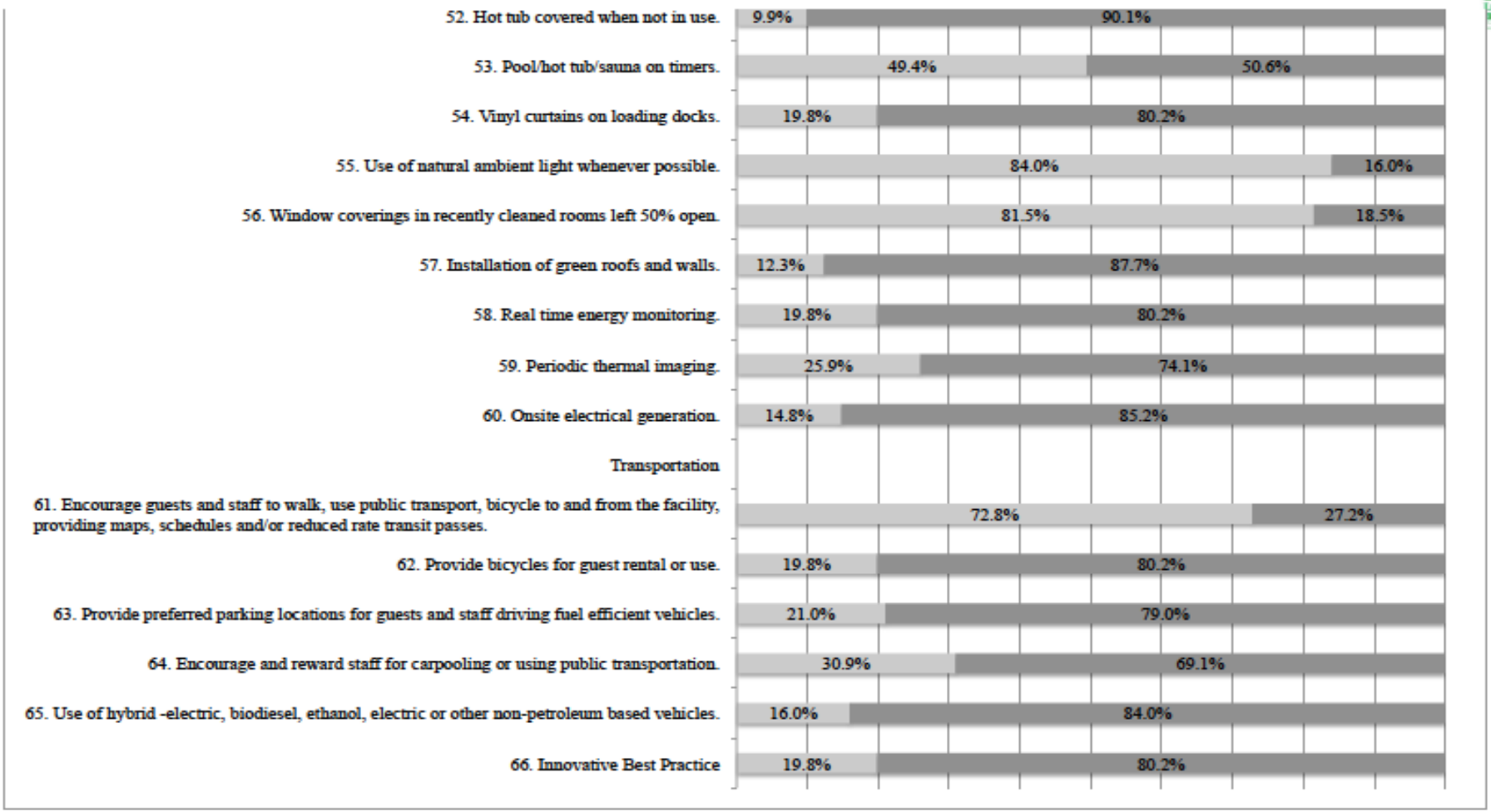
Results: Energy Efficiency Section on the Florida Green Lodging Program Application (p. 15-20)



Results: Energy Efficiency Section on the Florida Green Lodging Program Application (p. 15-20)



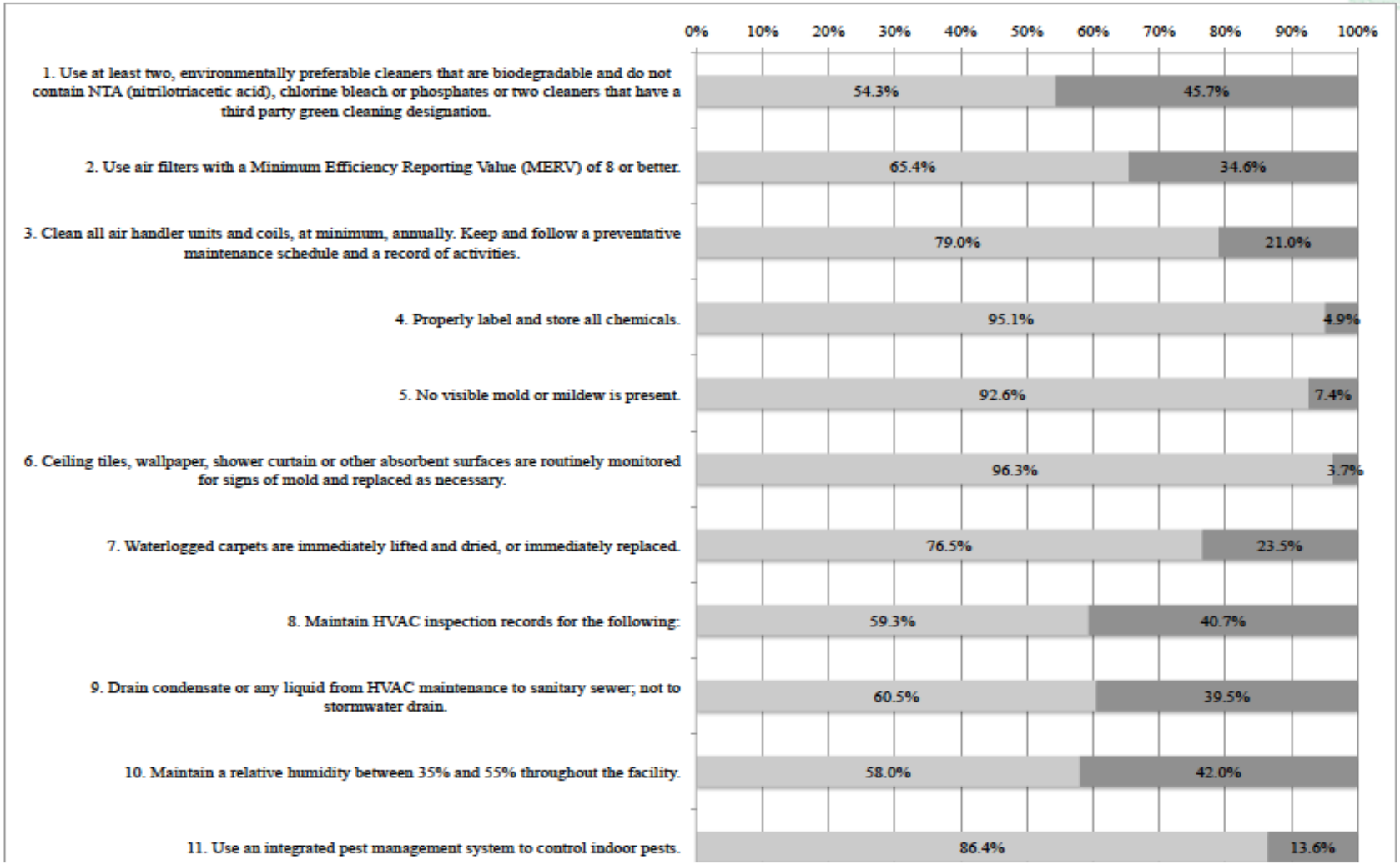
Results: Energy Efficiency Section on the Florida Green Lodging Program Application (p. 15-20)



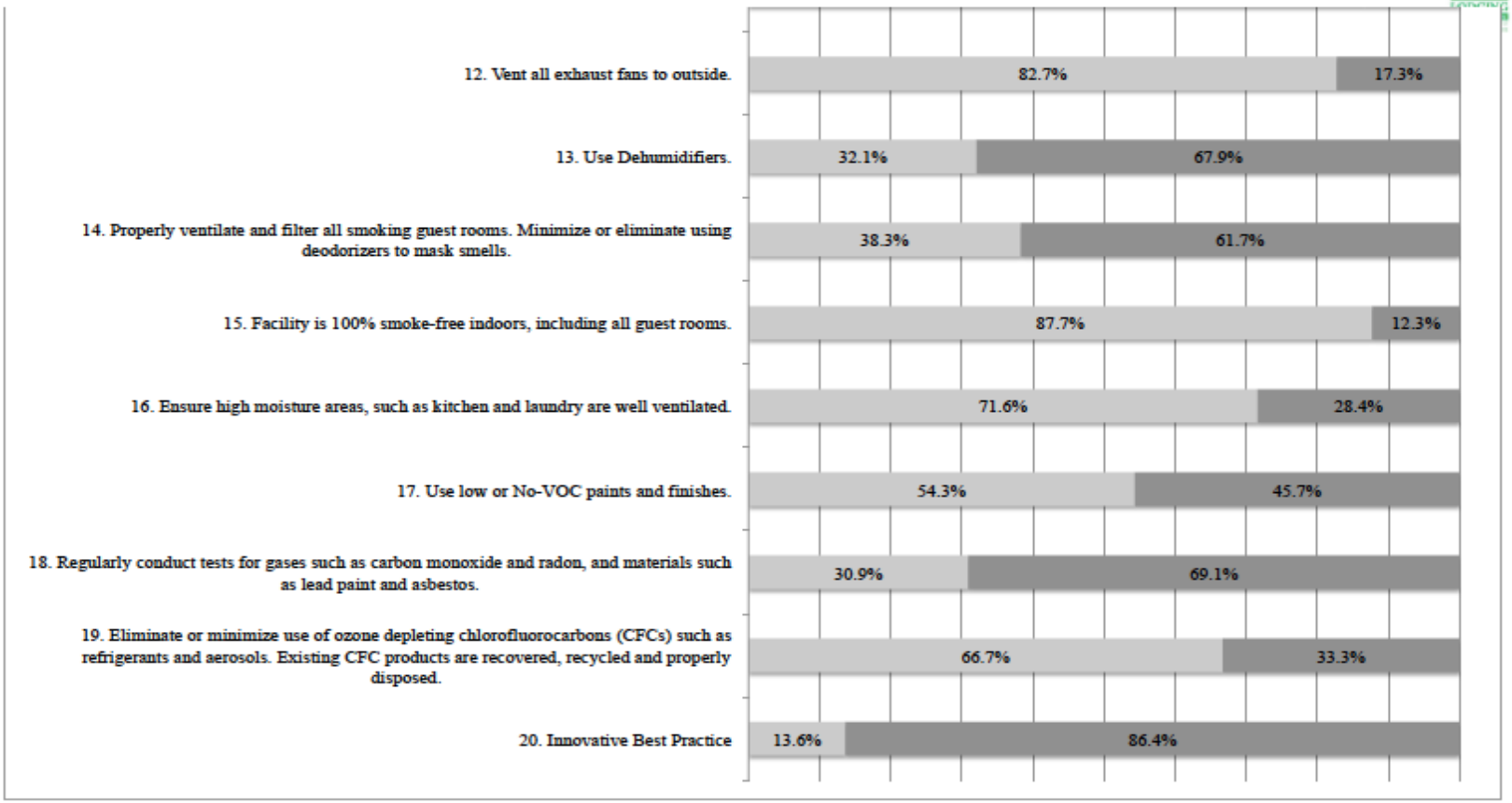
A minimum of 54 points must be obtained from this section in order for it to be considered complete and satisfied.
The results for all certified properties are:

Mean: 139.3
Median 135
Mode 80

Results: Indoor Air Quality Section on the Florida Green Lodging Program Application (p. 21-22)



Results: Indoor Air Quality Section on the Florida Green Lodging Program Application (p. 21-22)



A minimum of 21 points must be obtained from this section in order for it to be considered complete and satisfied.
The results for all certified properties are:
Mean: 139.3
Median 135
Mode 80

Appendix Three Social Media Definitions and FGLP Overview

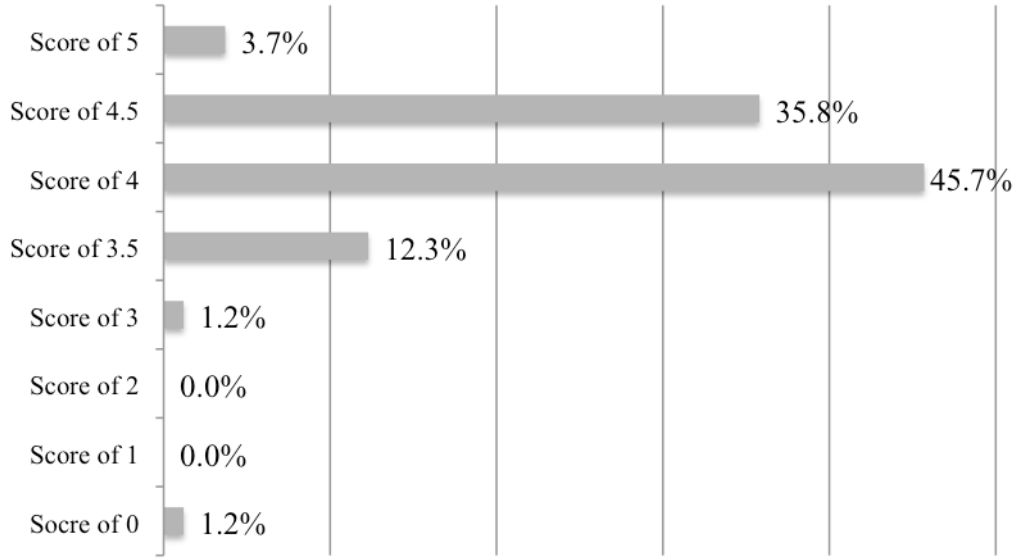
Twitter—The micro blogging social media website, incorporated in 2007, boasts 288 million monthly active users with the mission to "give everyone the power to create and share ideas and information instantly, without barriers" (Twitter 2015). Twitter limits users to messages of 120 or fewer characters and registered users send 500 million 'tweets' per day (Twitter 2015) with 77 percent of accounts registered outside of the United States (Twitter 2015). 55.6 percent of certified FGLP hotels have a registered account on Twitter, but the variance in the number of tweets, followers and users following the account are significant.

Facebook—More than one billion registered users actively connect with friends, family and businesses to "share and express what matters to them" (Facebook 2015) in a virtual environment. Launched in 2004 for select college students (Facebook 2015), the social media website expanded to the citizens of the world in 2006 as a media sharing site for text, photos and videos (Facebook 2015). 92.6 percent of certified FGLP hotels have a registered account on Facebook, but the variance in the number of likes, 'talking about' count and user check-ins are considerable.

FourSquare—"In 2009, Foursquare launched the check-in and real-time location sharing" (FourSquare 2015) social media website utilized by 55 million users worldwide and 1.9 million registered businesses (FourSquare 2015). The site encourages users to 'check-in' and rate individual businesses, which then allows other FourSquare users to see the popularity and the assessment of a business. To date, six billion 'check-ins' have occurred (FourSquare 2015). 84 percent of certified FGLP hotels have a registered account on FourSquare.

YouTube—YouTube was launched in May 2005 and the site "allows billions of people to discover, watch and share originally-created videos…from original content creators and advertisers large and small" (YouTube 2015). YouTube claims to have more than one billion users (2015), 300 hours of video are "uploaded to YouTube every minute" (YouTube 2015) and half of all views on the site come from mobile devices (2015). 90 percent of certified FGLP hotels have a presence on the video-sharing website, but the variance in the number of videos is significant.

TripAdvisor—TripAdvisor is an integrated website that "offers trusted advice from travelers and a wide variety of travel choices and planning features with seamless links to booking tools that check hundreds of websites to find the best hotel prices" (TripAdvisor 2015). The social media site claims 315 million monthly visitors (TripAdvisor 2015) to have a look at the 200 million reviews of the more than four and a half million "accommodations, restaurants and attractions" (TripAdvisor 2015). All of the of certified FGLP hotels have a presence on TripAdvisor, but not all of the properties have been reviewed by guests and therefore they do not all have a TripAdvisor rating as depicted in the following figure.

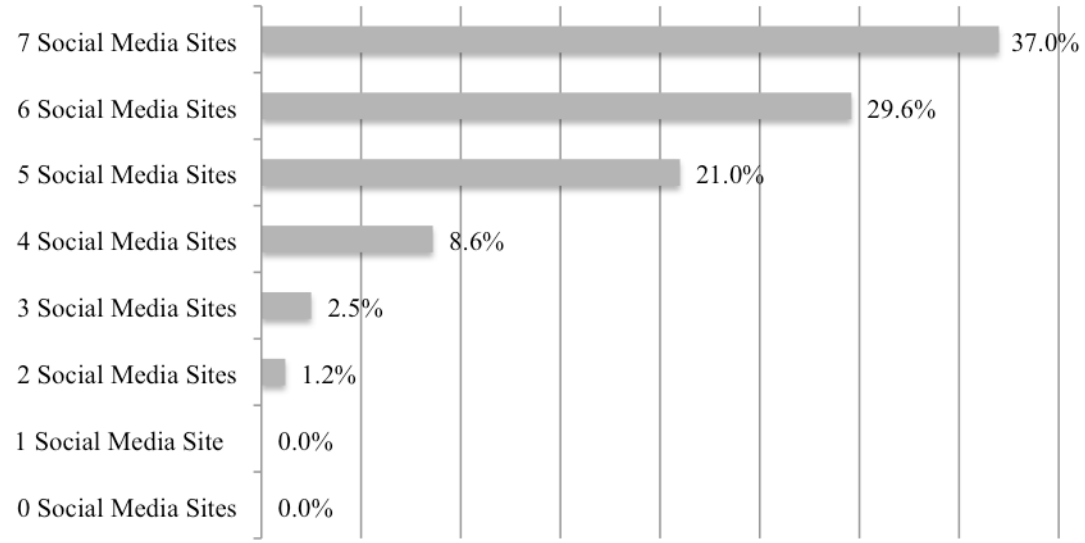


TripAdvisor: The Percentage of FGLP Hotels on TripAdvisor and the Corresponding Score

Pinterest—Pinterest professes to be a "visual bookmarking tool that helps you discover and save creative ideas" (Pinterest 2015). The social media website allows its members to "pin" (Pinterest 2015) a specific web link with an attached visual description to reference for later use. The site started in March 2010 and now claims to have "helped millions of people," (Pinterest 2015) but provide no exact figures as to how many members are registered to the site. 75 percent of certified FGLP hotels have a presence on the virtual bookmark website.

Flickr—An "online photo management and sharing application" (Flickr 2015) allows its members to use a website as a location to virtually store and share original photos and videos. On Flickr, members receive free electronic storage space for 500,000 of their personal photos, but the Flickr site opted to provide no additional analytics regarding the quantity of its members or the number or photos and video it houses. 90 percent of certified FGLP hotels have a presence on the photo-sharing website.

FGLP hotels have a presence on the following number of social media websites:



FGLP Overview: The Number of Social Media Sites in which FGLP Hotel's have a Presence

Appendix Four Web-Based Survey: Introduction Letter

Re: Florida Lodging Survey

Greetings-

Your knowledge and experience as the primary contact of a certified Florida Green Lodging hotel is of great value to researchers and State of Florida officials. You are kindly requested to participate in a seven-question survey that seeks to better understand what hotels consider the benefits of eco-certification programs to be and how you communicate with your customers. Your input may contribute to practical recommendations to increase the competitive advantage of the Florida Green Lodging Program. As a token of appreciation, your response will enter you into a drawing for one of five $10 Starbucks gift cards.

The brief survey should only take a few minutes to complete and all of your responses will remain confidential. That means that your name, email address, hotel name and hotel location will not be connected to any of your responses. So you should confidently proceed knowing that your individual responses will not be shared with competitors or State of Florida officials. Instead, an academic researcher will review your responses and the anonymised results will be shared as a collective group.

Take the survey

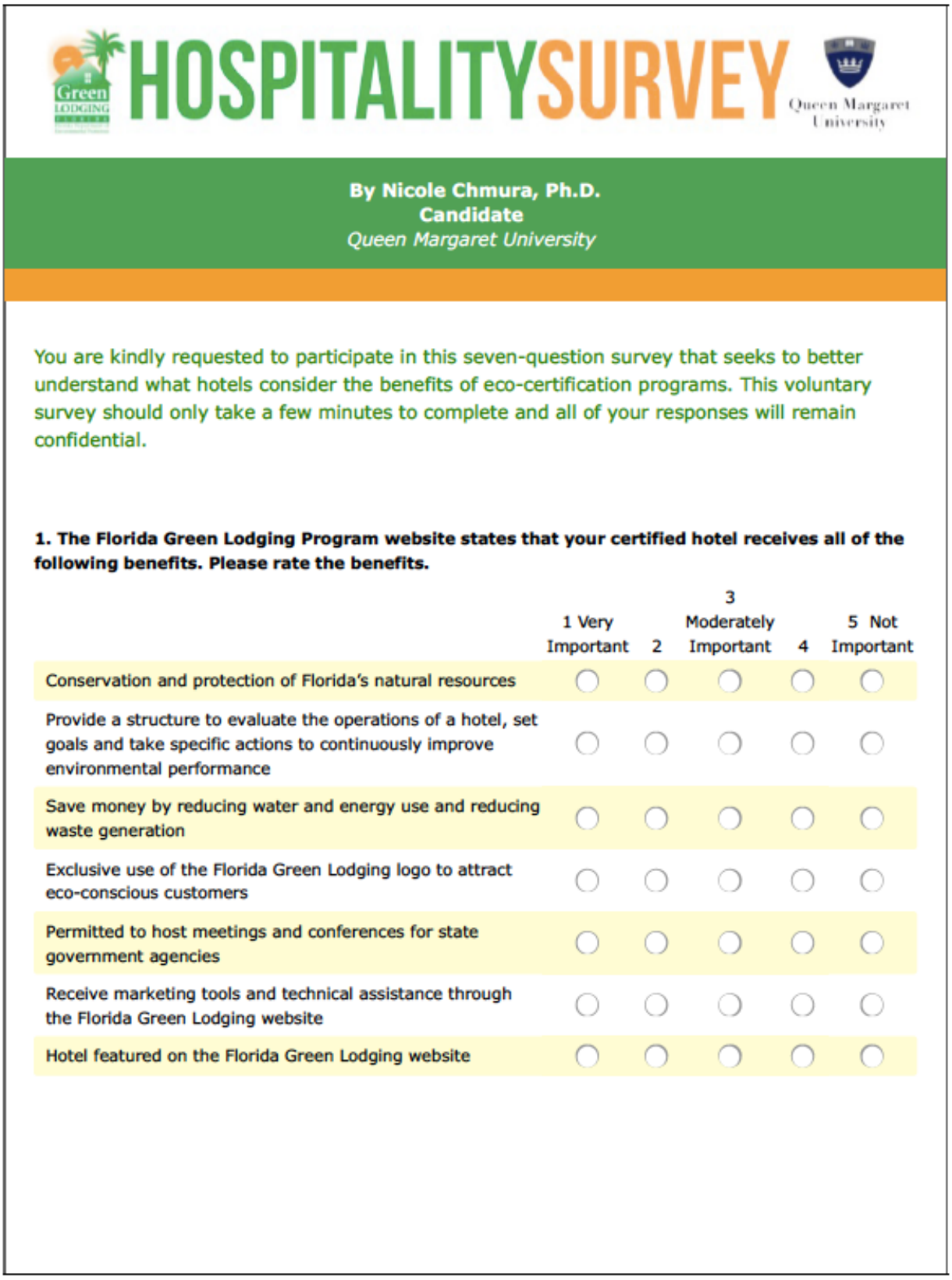
You may find it helpful to consult with a member of your hotel's management team for the survey if you are unsure of how to reply to specific questions. If you have any additional questions, comments or would like more information about this study, please do not hesitate to contact the researcher at nchmura@qmu.ac.uk.

After you complete the survey, you can request a summary of the research findings and also consider an opportunity to participate further with this research.
Thank you in advance for your participation.

Nicole J. Chmura
Ph.D. Candidate
Queen Margaret University

Please click here to take the survey. If you would like to be removed form this list, please following the removal link.

Appendix Five **Web-Based Survey: Survey**



HOSPITALITYSURVEY

Queen Margaret University

By Nicole Chmura, Ph.D.
Candidate
Queen Margaret University

You are kindly requested to participate in this seven-question survey that seeks to better understand what hotels consider the benefits of eco-certification programs. This voluntary survey should only take a few minutes to complete and all of your responses will remain confidential.

1. The Florida Green Lodging Program website states that your certified hotel receives all of the following benefits. Please rate the benefits.

	1 Very Important	2	3 Moderately Important	4	5 Not Important
Conservation and protection of Florida's natural resources	○	○	○	○	○
Provide a structure to evaluate the operations of a hotel, set goals and take specific actions to continuously improve environmental performance	○	○	○	○	○
Save money by reducing water and energy use and reducing waste generation	○	○	○	○	○
Exclusive use of the Florida Green Lodging logo to attract eco-conscious customers	○	○	○	○	○
Permitted to host meetings and conferences for state government agencies	○	○	○	○	○
Receive marketing tools and technical assistance through the Florida Green Lodging website	○	○	○	○	○
Hotel featured on the Florida Green Lodging website	○	○	○	○	○

2. The Florida Green Lodging Program website states that your certified hotel receives all of the following benefits. Please rank them from 1 to 7 by putting the relevant number in the ajacent box, with 1 being the top benefit and 7 offering a lesser benefit.

Conservation and protection of Florida's natural resources

Provide a structure to evaluate the operations of a hotel, set goals and take specific actions to continuously improve environmental performance

Save money by reducing water and energy use and reducing waste generation

Exclusive use of the Florida Green Lodging logo to attract eco-conscious customers

Permitted to host meetings and conferences for state government agencies

Receive marketing tools and technical assistance through the Florida Green Lodging website

Hotel featured on the Florida Green Lodging website

3. Are there other benefits you feel your hotel receives from the Florida Green Lodging Program, but are not listed above?

4. How many staff members are dedicated to social media efforts at your hotel?

- ◯ 0
- ◯ 1
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ 5 or more

HOSPITALITY SURVEY

Queen Margaret University

By Nicole Chmura, Ph.D.
Candidate
Queen Margaret University

5. What was your average occupancy rate for 2013? (i.e. percentage between 1-100)

6. What was your average daily rate (ADR) for 2013? (i.e. dollar amount)

7. Are there any changes you would recommend to improve the Florida Green Lodging Program?

HOSPITALITY SURVEY

Queen Margaret University

By Nicole Chmura, Ph.D.
Candidate
Queen Margaret University

Thank you for taking time out of your busy schedule to complete this survey.
Without your assistance, this research would not be possible.

Are you interested in participating in a brief 5-10 minute telephone interview that will focus on the Florida Green Lodging Program and your hotel's involvement?

Just like the survey, your participation (including your property's name and location) will be confidential and your feedback will be presented collectively as a group. For your participation, you will receive a five-dollar Starbucks gift card. Please enter your e-mail address if you are interested in participating.

Please enter your...

Email
Address
(optional)

If you would like to receive a summary of these results and the related research, please enter your e-mail address.

Please enter your...

Email Address
(optional)

Appendix Six **Web-Based Survey: Results**

Results: Electronic Survey of the Certified Hotels Within the Florida Green Lodging Program

In an effort to collect additional insight from the Florida Green Lodging Program certified hotels, a seven-question electronic survey was delivered to the individual listed as the pimary contact for each hotel. 81 surveys were emailed, one person opted-out, three emails were unable to be delivered and 52 surveys were completed, leading to a 64% response rate. The survey, hosted by Survey Monkey, was open from November-December, 2014.

1. The Florida Green Lodging Program website states that your certified hotel receives all of the following benefits. Please rate the benefits.
The respondent selected from a rating scale of: 1 Very Important, 2, 3, 4 Moderately Important, 5, 6, 7 Not Important.

Conservation and protection of Florida's natural resources
1: 98.1% 2: 1.9% 3: 0% 4: 0% 5: 0% 6: 0% 7: 0%

Provide a structure to evaluate the operations of a hotel, set goals and take specific actions to continuously improve environmental performance
1: 36.5% 2: 7.7% 3: 21.2% 4: 13.5% 5: 21.2% 6: 0% 7: 0%

Save money by reducing water and energy use and reducing waste generation
1: 80.8% 2: 7.7% 3: 7.7% 4: 1.9% 5: 1.9% 6: 0% 7: 0%

Exclusive use of the Florida Green Lodging logo to attract eco-conscious customers
1: 84.6% 2: 11.5% 3: 0% 4: 1.9% 5: 1.9% 6: 0% 7: 0%

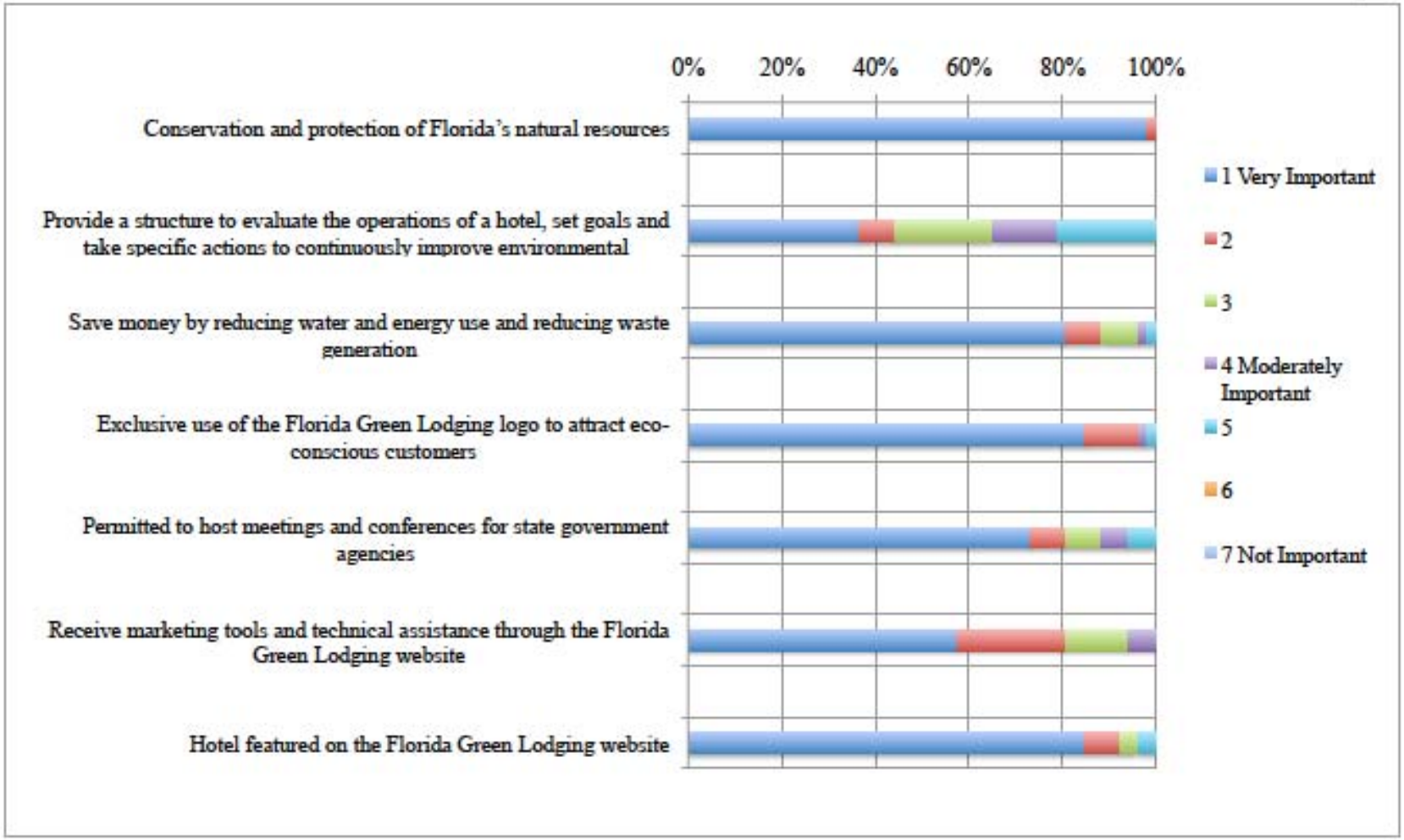
Permitted to host meetings and conferences for state government agencies
1: 73.1% 2: 7.7% 3: 7.7% 4: 5.8% 5: 5.8% 6: 0% 7: 0%

Receive marketing tools and technical assistance through the Florida Green Lodging website
1: 57.7% 2: 23.1% 3: 13.5% 4: 5.8% 5: 0% 6: 0% 7: 0%

Hotel featured on the Florida Green Lodging website
1: 84.6% 2: 7.7% 3: 3.8% 4: 0% 5: 3.8% 6: 0% 7: 0%

Results: Electronic Survey of the Certified Hotels Within the Florida Green Lodging Program

1. The Florida Green Lodging Program website states that your certified hotel receives all of the following benefits. Please rate the benefits.
Please note: The question sought opinions about the importance of each benefit individually, not as a group. Therefore, the results are not intended to rank the benefits collectively, but instead demonstrate the level of importance each benefit holds to certified hotels.



Results: Electronic Survey of the Certified Hotels Within the Florida Green Lodging Program

2. The Florida Green Lodging Program website states that your certified hotel receives all of the following benefits. Please rank them from 1 to 7, with 1 being the top benefit and 7 offering a lesser benefit. *The respondent selected from a rating scale of: 1 Very Important, 2, 3, 4 Moderately Important, 5, 6, 7 Not Important. Each numeric selection was only permitted to be used once.*

Conservation and protection of Florida's natural resources

1: 28.8% 2: 11.5% 3: 23.1% 4: 11.5% 5: 11.5% 6: 13.5% 7: 0%

Provide a structure to evaluate the operations of a hotel, set goals and take specific actions to continuously improve environmental performance

1: 0% 2: 1.9% 3: 0% 4: 5.8% 5: 9.6% 6: 28.8% 7: 53.8%

Save money by reducing water and energy use and reducing waste generation

1: 7.7% 2: 9.6% 3: 11.5% 4: 19.2% 5: 30.8% 6: 19.2% 7: 1.9%

Exclusive use of the Florida Green Lodging logo to attract eco-conscious customers

1: 17.3% 2: 44.2% 3: 28.8% 4: 7.7% 5: 1.9% 6: 0% 7: 0%

Permitted to host meetings and conferences for state government agencies

1: 26.9% 2: 19.2% 3: 5.8% 4: 17.3% 5: 1.9% 6: 7.7% 7: 21.2%

Receive marketing tools and technical assistance through the Florida Green Lodging website

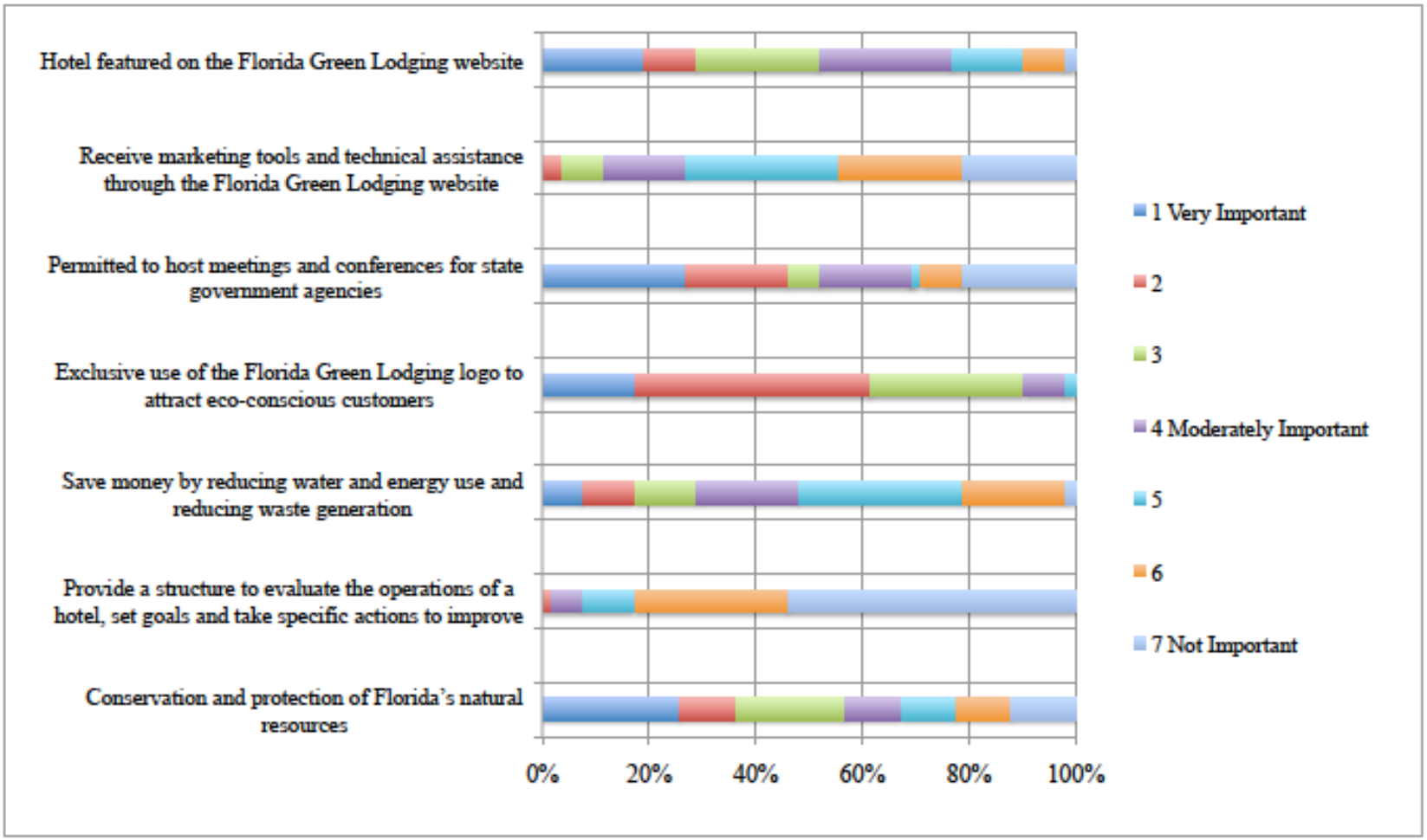
1: 0% 2: 3.8% 3: 7.7% 4: 15.4% 5: 28.8% 6: 23.1% 7: 21.2%

Hotel featured on the Florida Green Lodging website

1: 19.2% 2: 9.6% 3: 23.1% 4: 25% 5: 13.5% 6: 7.7% 7: 1.9%

Results: Electronic Survey of the Certified Hotels Within the Florida Green Lodging Program

2. The Florida Green Lodging Program website states that your certified hotel receives all of the following benefits. Please rank them from 1 to 7, with 1 being the top benefit and 7 offering a lesser benefit. *Please note: The question sought opinions about the importance of the benefits collectively, not individually. Each numeric selection was only permitted to be used once.*

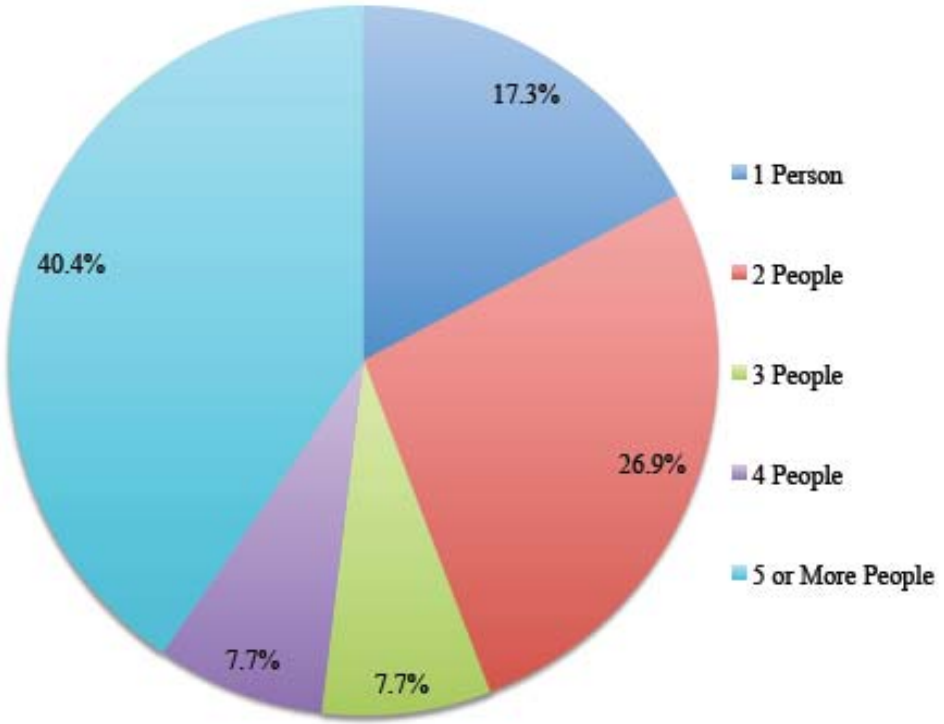


Results: Electronic Survey of the Certified Hotels Within the Florida Green Lodging Program

3. Are there other benefits you feel your hotel receives from the Florida Green Lodging Program, but are not listed above?
84.6% provided no response, but 15.4% provided the below comments:

- No, I am happy with the above.
- We like the printed towel reuse card.
- Are the "marketing tools and technical assistance" the few tiny posters online for us to print for our staff and links to other green programs? How about some real help that allows our hotel to intigrate our corporate logo and the Florida green logo. We could also use some ideas that we can use on our in-house television channel and on our Facebook page.
- Helps to bring staff awareness
- reinforces ongoing maintainence and housekeeping protocol
- It's a good reminder for staff members of our environmental initiatives.
- Heart of house awearness
- What marketing tools and technical assistance? I would rank this much higher if it actually existed.

4. How many staff members are dedicated to social media efforts at certified hotels



Results: Electronic Survey of the Certified Hotels Within the Florida Green Lodging Program

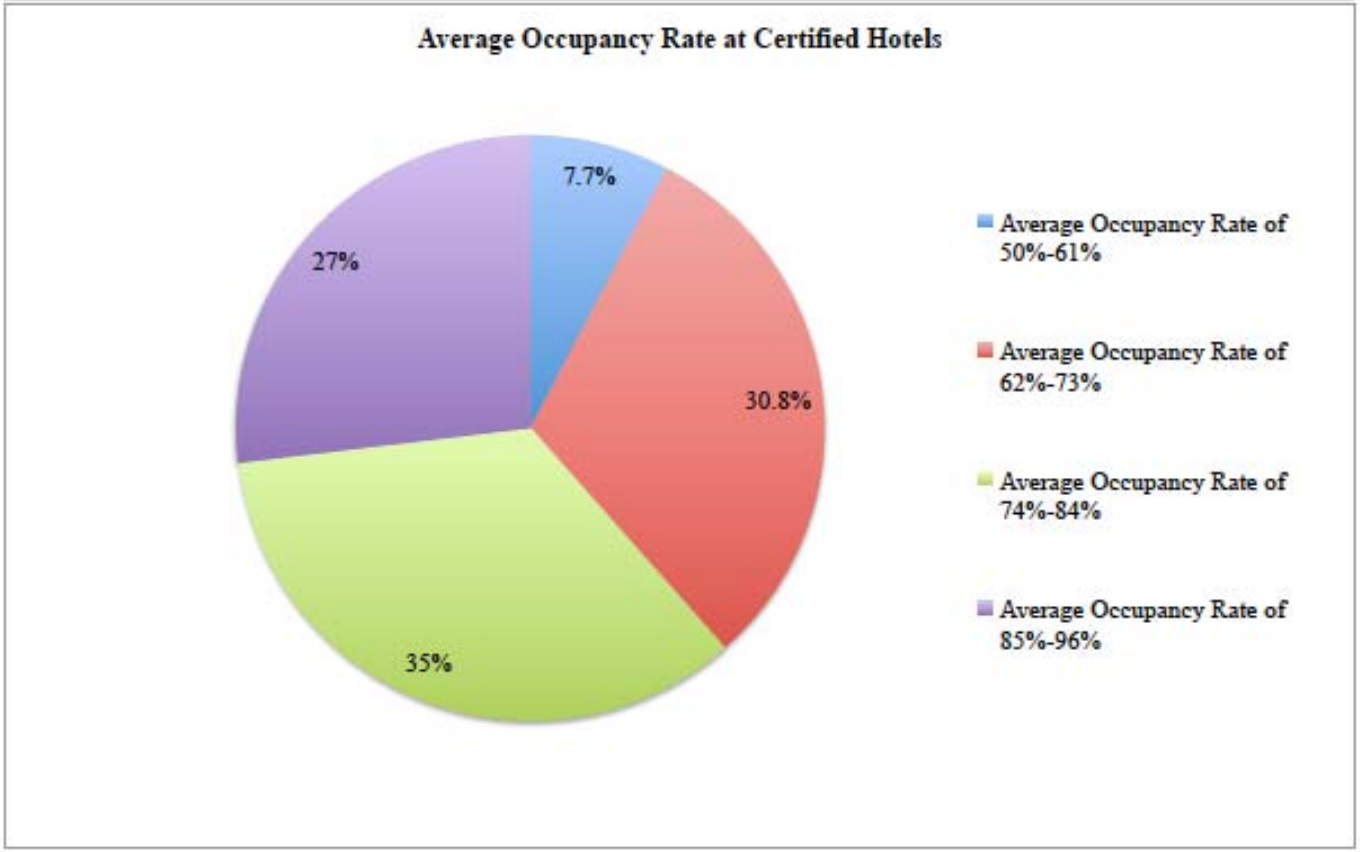
Average Occupancy Rate

Rate	*Frequency*
50	1
53	1
54	1
60	1
65	3
67	1
68	2
69	1
70	4
71	1
72	1
73	2
74	3
75	3
77	1
78	3
79	1
80	4
81	1
82	3
83	1
85	2
86	1
88	1
90	1
92	3
93	3
95	1
96	1

5. What was your average occupancy rate for 2013?
(i.e. percentage between 1-100)

Mean: 76.2 Median: 77.5 Mode: Multiple Results (70, 80)

Minimum: 50 Maximum: 96



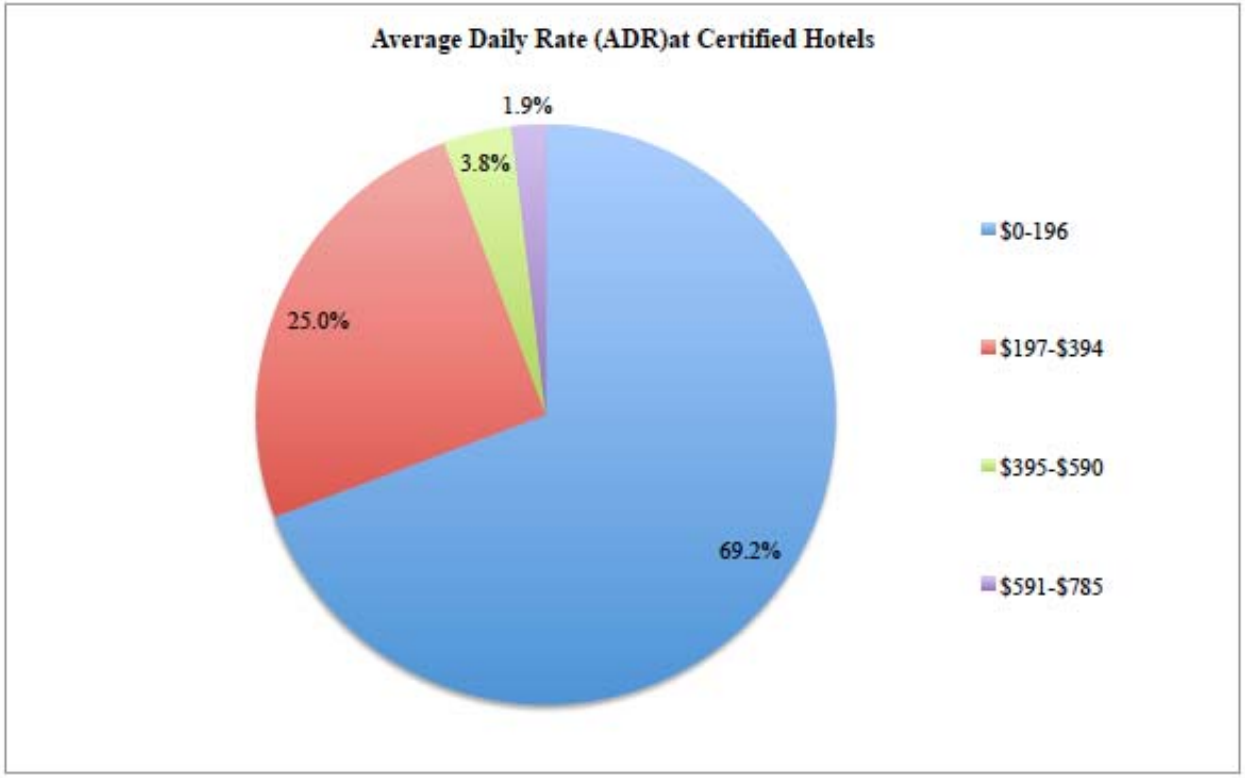
Results: Electronic Survey of the Certified Hotels Within the Florida Green Lodging Program

Average Daily Rate

Rate	*Frequency*
$80.00	1
$85.00	4
$90.00	3
$91.00	1
$92.00	1
$95.00	1
$98.00	1
$100.00	5
$110.00	1
$115.00	1
$120.00	1
$125.00	3
$130.00	2
$132.00	1
$135.00	2
$137.00	1
$140.00	1
$150.00	1
$165.00	1
$175.00	1
$180.00	2
$190.00	1
$200.00	6
$220.00	1
$225.00	1
$250.00	2
$270.00	1
$300.00	1
$325.00	1
$375.00	1
$500.00	1
$785.00	1

6. What was your Average Daily Rate (ADR) for 2013?
(i.e. dollar amount)

Mean: $172.40 Median: $133.50 Mode: $200.00
Minimum: $80.00 Maximum: $785.00



Results: Electronic Survey of the Certified Hotels Within the Florida Green Lodging Program

***What is the Revenue Per Available Room (RevPAR) for each certified hotel in 2013?** *The results were calculated using the following equation: Occupancy Rate x ADR = RevPAR*

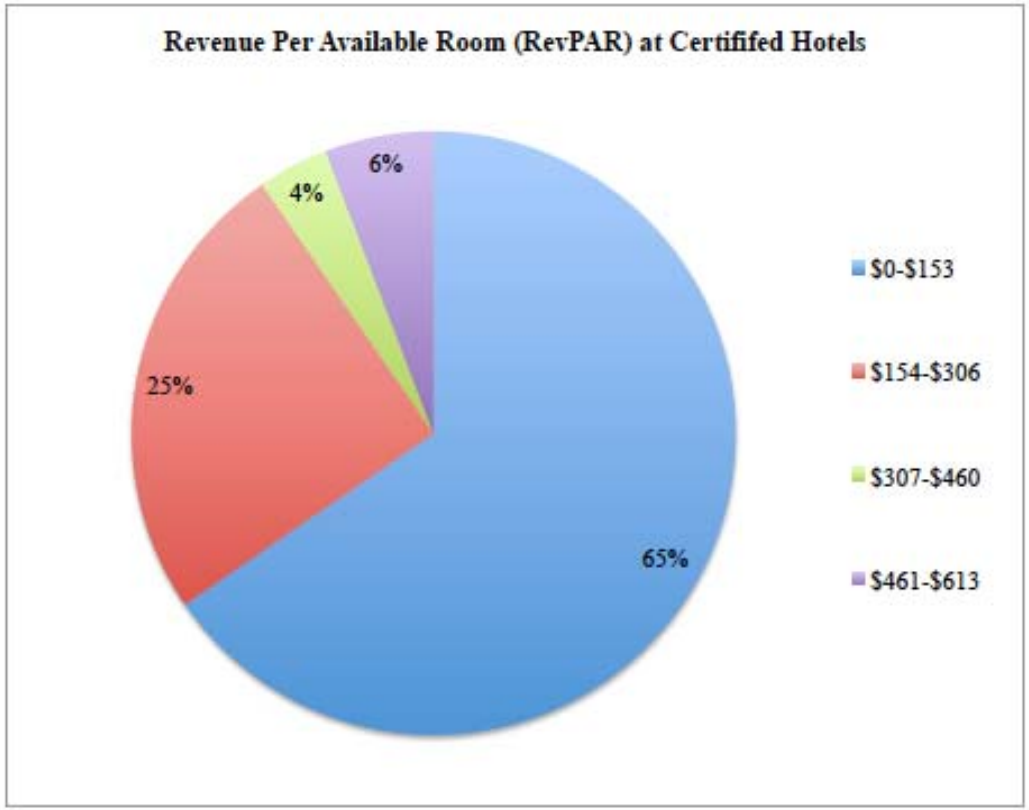
Mean: $137.76 Median: $98.08 Mode: $144.00

Minimum: $42.40 Maximum: $612.30

*--This question was not included in the survey and was instead calculated using the results of questions five and six

Average Daily Rate

Rate	*Frequency*
$42.40	1
$46.00	1
$51.00	1
$55.25	1
$61.75	1
$62.05	1
$63.00	1
$64.61	1
$66.30	1
$67.50	1
$67.62	1
$68.00	1
$70.00	1
$71.28	1
$73.00	1
$74.00	1
$77.00	1
$77.40	1
$81.00	1
$84.00	1
$86.25	1
$87.10	1
$91.00	1
$91.80	1
$92.50	1
$96.25	1
$99.90	1
$100.00	1
$101.40	1
$112.34	1
$123.00	1
$144.00	2
$150.00	1
$151.80	1
$155.80	1
$158.00	1
$161.00	1
$166.00	1
$167.40	1
$170.00	1
$176.00	1
$186.00	1
$209.25	1
$225.00	1
$240.00	1
$248.40	1
$255.00	1
$308.75	1
$330.00	1
$400.00	1
$612.30	1



Results: Electronic Survey of the Certified Hotels Within the Florida Green Lodging Program

7. Are there any changes you would recommend to improve the Florida Green Lodging Program?

59.6% provided no response, but 40.4% provided the below comments:

- I think you need to improve the Florida Green Lodging Program by helping the environment more and saving money that doesn't need to be spent.
- Can you please have them update the website!!! I know that so many of those properties have not complied with the new standards. I feel like a child when I say this, but it is not FAIR to the properties that spents weeks completing the lengthy electronic application.
- None at this time
- Have the state advertise using the florida green lodging mark. Maybe even recommend the local CVBs include it in its advertisements too.
- UPDATE THE WEBSITE!!!
- Not to bite the hand that feeds us because we get a ton of government business when they visit Tallahassee, but I don't believe that all state meeting business is being held only at certified hotels. If it's a law…enforce it.
- My manager gets monthly emails from corportate that have messages and photos for us to use on facebook, instagram and twitter. I wonder if we could get something like this or even stories to link to from the green lodging group.
- Need: clear stickers or window clings with the green logo on it for the hotel entrance.
- Please put an end to the lies. Only the certified hotels have earned the right to be there.
- Include the green lodging logo in Visit Florida advertisements
- Regular communication
- I'm intereested in seeing how much money is being spent on state government travel each year. This information would help justify our annual participation in this program.
- You only ask about the Audubon program, what about all of the other green or charitable groups our hotel support.
- not at this time
- I would like to see a monthly or even quarterly newsletter.
- How about an online shop to purchase Florida green lodging logo merchindise for us to display on property. We had to find a company willing to make outdoor flags with the logo on it because the don't offer such items.
- yes, please update your website with the actual properties that have complied with the new application process. Youare years behind. Let's keep it real
- !Consider decreasing the size of the new application. It is rediculously long and asks questions that seem completely unnecessary.
- More understanding for smaller properties that don't have large numbers - conscious about green efforts for small, family-owned businesses not able to produce large conservation figures to get palm ratings
- We would like regular communcations with the Florida lodging program with date reminders of the program, helpful advice, new hotels with the designation and even ways to involve our staff. Sadly we sent in our application and we had to call a month later to see if we were approved. This feels very much like a one-way relationship-let's work on that!
- Letting us know when renewal's are due and what is still needed to stay in compliance as sometimes new people take over the program and do not know what exactly is needed to done.

Results: Electronic Survey of the Certified Hotels Within the Florida Green Lodging Program

Are you interested in participating in a brief telephone interview that will focus on the Florida Green Lodging Program and your hotel's involvement?

86.5% provided no response, but 13.5% indicated their willingness to participating in telephone interviews.

Would you like to receive a summary of the survey results and the related research?

86.5% provided no response, but 13.5% indicated they wanted to receive a summary of the results.

Appendix Seven **Web-Based Survey: Analysis of Open-Ended Survey Reponses**

Analysis of Open-Ended Survey Reponses

Question 3-Other_Benefits		Question 7-Comments	
C	No, I am happy with the above.	R,E,$	I think you need to improve the Florida Green Lodging Program by helping the environment more and saving money that doesn't need to be spent.
C	We like the printed towel reuse cards		None at this time
R,M	Are the "marketing tools and technical assistance" the few tiny posters online for us to print for our staff and links to other green programs? How about some real help that allows our hotel to intigrate our corporate logo and the Florida green logo. We could also use some ideas that we can use on our in-house television channel and on our Facebook page.	W	Can you please have them update the website!!! I know that so many of those properties have not complied with the new standards. I feel like a child when I say this, but it is not FAIR to the properties that spents weeks completing the lengthy electronic application.
C	Helps to bring staff awareness.	R,M	Have the state advertise using the florida green lodging mark. Maybe even recommend the local CVBs include it in its advertisements too.
C,E	reinforces ongoing maintainence and housekeeping protocol	W	UPDATE THE WEBSITE!!!
C,E	It's a good reminder for staff members of our environmental initiatives.	R	Not to bite the hand that feeds us because we get a ton of government business when they visit Tallahassee, but I don't believe that all state meeting business is being held only at certified hotels. If it's a law…enforce it.
C	Heart of house awearness	R,M	My manager gets monthly emails from corportate that have messages and photos for us to use on facebook, instagram and twitter. I wonder if we could get something like this or even stories to link to from the green lodging group.
M	What marketing tools and technical assistance? I would rank this much higher if it actually existed.	R,M	Need: clear stickers or window clings with the green logo on it for the hotel entrance.
		W	Please put an end to the lies. Only the certified hotels have earned the right to be there.
		R,M	Include the green lodging logo in Visit Florida advertisements
		R,M	Regular communication
		$	I'm intereested in seeing how much money is being spent on state government travel each year. This information would help justify our annual participation in this program.
		R,E	You only ask about the Audubon program, what about all of the other green or charitable groups our hotel support.
			not at this time
		R,M	I would like to see a monthly or even quarterly newsletter.

R	How about an online shop to purchase Florida green lodging logo merchindise for us to display on property. We had to find a company willing to make outdoor flags with the logo on it because the don't offer such items.
W	yes, please update your website with the actual properties that have complied with the new application process. Youare years behind. Let's keep it real!
R	Consider decreasing the size of the new application. It is rediculously long and asks questions that seem completely unnecessary.
R	More understanding for smaller properties that don't have large numbers - conscious about green efforts for small, family-owned businesses not able to produce large conservation figures to get palm ratings
R,M	We would like regular communcations with the Florida lodging program with date reminders of the program, helpful advice, new hotels with the designation and even ways to involve our staff. Sadly we sent in our application and we had to call a month later to see if we were approved. This feels very much like a one-way relationship-let's work on that!
R,M	Letting us know when renewal's are due and what is still needed to stay in compliance as sometimes new people take over the program and do not know what exactly is needed to done.

Key

R-----Recommended Improvement
M----Marketing/ Communications
E-----Environmental Performance
$-----Economic/Financial
W----Website
C-----Compliment
Green---Positive Tone
Red-----Negative Tone
No Color----Neutral Tone

Appendix Eight Interview: Introduction Email Letter

You recently completed a brief online survey about your knowledge and experience as the primary contact of a certified Florida Green Lodging hotel and you indicated your willingness to participate in a brief follow-up telephone interview. The interview will continue to investigate what hotels consider the benefits of eco-certification programs to be and how you communicate with your customers (please see the attachment). Your input may contribute to practical recommendations to increase the competitive advantage of the Florida Green Lodging Program.

If you are sill interested in participating in a brief interview, please respond to this email with:

Telephone Number:
Date:
Time (please hold 30 minutes on your calendar):

Just as the online survey promised, your interview participation will remain confidential. That means that your name, email address, hotel name and hotel location will not be connected to any of your responses. So you should confidently proceed knowing that your individual responses will not be shared with competitors or State of Florida officials. Instead, an academic researcher will review your responses and the anonymised results will be shared as a collective group.

If you choose to participate in an interview, you will be sent a $10 Starbucks gift card as a token of appreciation.

Thank you in advance for your response,

Nicole J. Chmura
Ph.D. Candidate
Queen Margaret University

Appendix Nine Interview: Information Sheet

Queen Margaret University
EDINBURGH

My name is Nicole Chmura and I am conducting Ph.D. research in the School of Arts, Social Sciences and Management at Queen Margaret University in Edinburgh, UK. The tile of the research project is:

The Relationship Among Environmental Performance, Economic Results and Social Media Presence

The study will explore what resources and capabilities eco-certified hotels and the sponsoring certification body believe impart competitive advantage and what additional supportive tools could be added to increase the competitive advantage of an eco-certification. Your earlier input in the online survey was insightful and your continued involvement may contribute to practical recommendations to increase the competitive advantage of the Florida Green Lodging Program, as well as provide a practical perspective to this theoretical topic.

When you completed the online survey about your knowledge and experience as the primary contact of a certified Florida Green Lodging hotel you indicated your willingness to participate in a brief follow-up telephone interview. I would very much welcome your continued assistance and I am aware of no risks associated with your participation and the information that will be requested. The interview should take no more than 30 minutes and if for any reason you would like to withdraw from the study at any stage, you are free to do so and would not have to provide a reason.

Please understand, this is not a test and there are no right or wrong answers – the real value rests in your thoughts and opinions. There is no information you need to gather prior to the conversation and as a token of appreciation, you will be sent a $10 Starbucks gift card if you choose to participate in an interview.

Just as the online survey promised, your interview participation will remain confidential. That means that your name, email address, hotel name and hotel location will not be connected to any of your responses. So you should confidently proceed knowing that your individual responses will not be shared with competitors or State of Florida officials. Instead, an academic researcher will review your responses and the anonymised results will be shared as a collective group and maybe published in a journal or presented at a conference.

If you would like to contact an independent person, who knows about this project but is not directly involved in it, you are welcome to contact Professor Andrew J. Frew. His contact details are provided below.

If you have read this information and have further questions, please do not hesitate to contact the researcher. If you are interested in participating in a brief interview, please send an email to (nchmura@qmu.ac.uk) with the following information:

- **Telephone Number:**
- **Date:**
- **Time (*please hold 30 minutes on your calendar*):**

I thank you in advance for your consideration and look forward to talking with you.

Warmest regards,

Nicole J. Chmura

Contact Details of the Researcher
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Ph.D. Candidate
School of Arts, Social Sciences and Management
Queen Margaret University
Edinburgh, EH 21 6UU

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(813) 854-4053

Contact Details of the Independent Adviser
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Professor Emeritus
School of Arts, Social Sciences and Management
Queen Margaret University
Edinburgh, EH 21 6UU

afrew@qmu.ac.uk
+44 (0)131 474 0000

Appendix Ten Interview: Line of Questioning

1. What do you think is the primary reason your hotel decided to seek the FGLP certification?

2. What benefit do you think you actually get from the FGLP certification? If not the same as the "primary reason"…why is this?

3. The FGLP lists seven benefits on its website that certified hotels receive. I am going to name them and I want you to briefly tell me what you think of each.
    - Conservation and protection of Florida's natural resources
    - Provide a structure to evaluate the operations of a hotel, set goals and take specific actions to continuously improve environmental performance
    - Save money by reducing water and energy use and reducing waste generation
    - Exclusive use of the Florida Green Lodging logo to attract eco-conscious customers
    - Permitted to host meetings and conferences for state government agencies
    - Receive marketing tools and technical assistance through the Florida Green Lodging website
    - Hotel featured on the Florida Green Lodging website

4. Let's talk about competitive advantage, which is where your hotel receives more value than your competitor… (*remember this is just your opinion).*

    - Four categories of questions: 1)marketing benefits; 2)higher environmental standards; 3)increased financial results because of operational savings and additional revenue; 4)overall eco-certification
        i. Do you think the marketing benefits of the FGLP are valuable?
        ii. Do you think the marketing benefits of the FGLP are rare?
        iii. Do you think the marketing benefits of the FGLP are difficult to imitate?
        iv. Do you think the marketing benefits of the FGLP are full used and embraced by the leadership of your hotel?

Interview Table: VIRO Framework for Hotel ## Interview (Example)

Interview with Hotel ##	**Valuable**	**Rare**	**Inimitability** (*Difficult to Imitate*)	**Organization** (*Exploited by the Organization*)	Competitive Implications
Marketing	Yes	No	Yes	No	Competitive Parity
Environmental	Yes	Yes	Yes	Yes	Sustained Competitive Advantage
Economic					
Overall Eco-Certification					

5. Do you think there are any connections between your hotel's operational outcomes (i.e. how much water and electricity is used or how much is recycled) and its revenue/profit?

6. Do you think there are any connections between your hotel's operational outcomes (i.e. how much water and electricity is used or how much is recycled) and how your hotel uses social media?

7. Do you think there are any connections between your hotel's revenue/profit and how your hotel uses social media?

8. If you were the general manager of your hotel, would you continue your membership with the FGLP? Would you consider another certification?

9. In general, (*still wearing your imaginary general manager hat*) would you consider a membership in any eco-certification program valuable? Rare? Difficult to imitate? Could be fully used and embraced by the leadership of your hotel?

10. What compelled you to respond to the FGLP survey you received by email?

    I think there could be interesting insight to gain with this question because of the rather high response rate of 64%, which could be an additional bit of information to include in the discussion chapter.

Appendix Eleven Outlier Labelling Rule

	Q1	Q3	Q3-Q1	g	Q3-Q1*g	lower	upper
Social Media Staff (0)	2	5	3	2.2	6.6	**-4.6**	**11.6**
RevPAR (2)	70.32	167.05	96.73	2.2	212.806	**-142.486**	**379.856**
% Recycled (3)	10.591	57.6903	47.0993	2.2	103.61846	**-93.02746**	**161.30876**
Cost of Water (2)	141.307	554.2617	412.9547	2.2	908.50034	**-767.19334**	**1462.76204**
Cost of Waste (2)	52.5493	131.4377	78.8884	2.2	173.55448	**-121.00518**	**304.99218**
Cost of Energy (1)	836.7612	2132.6089	1295.8477	2.2	2850.86494	**-2014.10374**	**4983.47384**
Twitter Number of Tweets (2)	0	1167.5	1167.5	2.2	2568.5	**-2568.5**	**3736**
Twitter Following (7)	0	389.5	389.5	2.2	856.9	**-856.9**	**1246.4**
Twitter Followers (4)	0	1120.75	1120.75	2.2	2465.65	**-2465.65**	**3586.4**
Facebook Likes (5)	125	4837	4712	2.2	10366.4	**-10241.4**	**15203.4**
Facebook Talking About (6)	9	320	311	2.2	684.2	**-675.2**	**1004.2**
Facebook Check-ins (2)	562	23465	22903	2.2	50386.6	**-49824.6**	**73851.6**
YouTube Number of Videos (3)	80.25	668.75	588.5	2.2	1294.7	**-1214.45**	**1963.45**
FourSquare Score (0)	6.6	8.6	2	2.2	4.4	**2.2**	**13**
FourSquare Total Visits (1)	827.75	6088.5	5260.75	2.2	11573.65	**-10745.9**	**17662.15**
TA Reviews (0)	217	1238.5	1021.5	2.2	2247.3	**-2030.3**	**3485.8**
Total Number of SM Sites (0)	5	7	2	2.2	4.4	**0.6**	**11.4**

Appendix Twelve Multicollinearity Tables

Correcting for Multicollinearity

The investigation into the possibility of multicollinearity in the six research questions revealed that two independent variables (FourSquare-Total Visitors and FourSquare-Total Visits) amassed elevated Variance Inflation Factors (VIF) that were greater than what Mason and Parreault (1991) proffered, which was anything greater than 10. The two below tables demonstrate original calculation (first table) and a table that corrected for multicollinearity. The adjustments are observable in the VIF column.

Original Calculations

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	252.610	156.616		1.613	.117		
	Twitter (Number of Tweets)	-.001	.011	-.025	-.119	.906	.086	11.655
	Twitter (Following)	-.010	.018	-.063	-.526	.602	.270	3.706
	Twitter (Followers)	.074	.010	1.115	7.704	.000	.185	5.398
	Facebook (Participation)	-16.741	31.635	-.044	-.529	.600	.563	1.775
	Facebook (Likes)	-.006	.003	-.447	-1.954	.060	.074	13.489
	Facebook (Talking About)	.068	.033	.416	2.080	.046	.097	10.305
	Facebook (Check-ins)	.003	.001	.634	3.518	.001	.120	8.356
	YouTube (Presence)	-83.462	33.073	-.219	-2.524	.017	.515	1.940

	YouTube (Number of Videos)	-.029	.022	-.156	-1.332	.192	.282	3.542
	FourSquare (Total Visitors)	-.003	.032	-.063	-.105	.917	.011	92.013
	FourSquare (Presence)	-13.663	45.247	-.036	-.302	.765	.275	3.631
	FourSquare (Score)	5.310	4.477	.156	1.186	.245	.225	4.438
	FourSquare (Total Visits)	-.011	.014	-.469	-.805	.427	.011	87.344
	Pinterest (Presence)	-39.670	28.969	-.133	-1.369	.181	.410	2.438
	Flickr (Presence)	-36.054	29.416	-.113	-1.226	.230	.454	2.204
	Trip Advisor (Rating)	19.309	20.303	.070	.951	.349	.716	1.396
	Trip Advisor (Reviews)	.005	.019	.031	.262	.795	.272	3.681
	Social Media Staff	11.264	5.302	.176	2.124	.042	.564	1.774
	Total Number of Social Media Sites (Out of 7)	-48.386	19.197	-.466	-2.520	.017	.114	8.809

Corrected for Multicollinearity

a. Dependent Variable: RevPAR

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	255.854	151.156		1.693	.100		

	Twitter (Number of Tweets)	-.001	.010	-.017	-.087	.931	.100	9.030
	Twitter (Following)	-.010	.018	-.062	-.529	.600	.271	3.694
	Twitter (Followers)	.074	.008	1.107	8.997	.000	.248	4.028
	Facebook (Participation)	-16.860	31.122	-.044	-.542	.592	.564	1.773
	Facebook (Likes)	-.006	.002	-.460	-2.448	.020	.106	9.408
	Facebook (Talking About)	.069	.029	.425	2.387	.023	.119	8.428
	Facebook (Check-ins)	.003	.001	.634	3.578	.001	.120	8.348
	YouTube (Presence)	-84.110	31.988	-.221	-2.629	.013	.534	1.873
	YouTube (Number of Videos)	-.030	.021	-.160	-1.457	.155	.312	3.206
	FourSquare (Presence)	-14.856	43.121	-.039	-.345	.733	.294	3.403
	FourSquare (Score)	5.273	4.394	.155	1.200	.239	.227	4.410
	FourSquare (Total Visits)	-.013	.003	-.528	-3.645	.001	.179	5.574
	Pinterest (Presence)	-40.199	28.086	-.135	-1.431	.162	.423	2.365
	Flickr (Presence)	-36.876	27.916	-.116	-1.321	.196	.488	2.048
	Trip Advisor (Rating)	19.571	19.835	.071	.987	.331	.727	1.375
	Trip Advisor (Reviews)	.005	.018	.035	.309	.760	.295	3.388
	Social Media Staff	11.369	5.127	.178	2.217	.034	.584	1.712

Total Number of Social Media Sites (Out of 7)	-49.118	17.608	-.473	-2.790	.009	.131	7.648

a. Dependent Variable: RevPAR

Appendix Thirteen Regression Analysis Tables

Backwards Regression Analysis Models

When interpreting the stepwise backwards regression results, many figures must be considered and evaluated to determine how each interacts with the other. Section 6.3 provides a brief digest of the numeric figures that are examined in section 6.3.3.1-6.3.3.6 and provides a graphic explanation (figure 6.3) of the framework used to test the six hypotheses developed to understand the relationship between environmental performance, economic results and social media presence.

Hypothesis 1

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	273.150	179.670		1.520	.138
	Social Media Staff	4.407	5.626	.090	.783	.439
	No_Outliers_Number_of_Tweets	.008	.016	.124	.519	.607
	No_Outliers_Twitter_Following	.006	.046	.030	.139	.891
	No_Outliers_Twitter_Followers	.066	.023	.657	2.826	.008
	Facebook (Participation)	5.039	35.411	.017	.142	.888
	No_Outliers_FB_Likes	.011	.006	.503	1.647	.109
	No_Outliers_FB_Talking_About	.074	.079	.308	.948	.350
	No_Outliers_FB_Checkins	-.001	.001	-.249	-.892	.379
	YouTube (Presence)	-98.168	37.694	-.337	-2.604	.014
	No_Outliers_YouTube_Videos	-.051	.028	-.338	-1.842	.075
	FourSquare (Presence)	29.589	48.176	.102	.614	.543
	No_Outliers_FourSquare_Score	5.846	5.112	.224	1.144	.261
	No_Outliers_FourSquare_Total_Visits	-.004	.003	-.173	-1.094	.282

	Pinterest (Presence)	-32.807	31.840	-.144	-1.030	.311
	Flickr (Presence)	-21.613	31.313	-.089	-.690	.495
	No_Outliers_TA_Rating	15.852	22.195	.075	.714	.480
	No_Outliers_TA_Reviews	.011	.019	.089	.554	.583
	Total Number of Social Media Sites (Out of 7)	-50.596	21.708	-.638	-2.331	.026
2	(Constant)	274.779	176.601		1.556	.129
	Social Media Staff	4.440	5.537	.091	.802	.428
	No_Outliers_Number_of_Tweets	.009	.014	.138	.648	.521
	No_Outliers_Twitter_Followers	.068	.020	.674	3.396	.002
	Facebook (Participation)	5.025	34.880	.017	.144	.886
	No_Outliers_FB_Likes	.010	.006	.483	1.814	.079
	No_Outliers_FB_Talking_About	.076	.076	.316	1.002	.323
	No_Outliers_FB_Checkins	-.001	.001	-.242	-.895	.377
	YouTube (Presence)	-97.902	37.082	-.337	-2.640	.013
	No_Outliers_YouTube_Videos	-.051	.027	-.337	-1.868	.071
	FourSquare (Presence)	29.114	47.334	.100	.615	.543
	No_Outliers_FourSquare_Score	5.756	4.994	.221	1.152	.257
	No_Outliers_FourSquare_Total_Visits	-.004	.003	-.172	-1.105	.277
	Pinterest (Presence)	-33.320	31.151	-.147	-1.070	.293
	Flickr (Presence)	-21.651	30.843	-.089	-.702	.488
	No_Outliers_TA_Rating	15.502	21.721	.074	.714	.480
	No_Outliers_TA_Reviews	.011	.019	.091	.583	.564
	Total Number of Social Media Sites (Out of 7)	-50.542	21.379	-.638	-2.364	.024

3	(Constant)	283.309	163.967		1.728	.093
	Social Media Staff	4.485	5.448	.092	.823	.416
	No_Outliers_Number_of_Tweets	.009	.014	.135	.647	.522
	No_Outliers_Twitter_Followers	.069	.019	.680	3.553	.001
	No_Outliers_FB_Likes	.010	.006	.478	1.836	.075
	No_Outliers_FB_Talking_About	.075	.075	.311	1.007	.321
	No_Outliers_FB_Checkins	-.001	.001	-.233	-.898	.375
	YouTube (Presence)	-97.849	36.542	-.336	-2.678	.011
	No_Outliers_YouTube_Videos	-.049	.025	-.328	-1.981	.056
	FourSquare (Presence)	27.161	44.695	.093	.608	.547
	No_Outliers_FourSquare_Score	5.863	4.867	.225	1.205	.237
	No_Outliers_FourSquare_Total_Visits	-.004	.003	-.176	-1.170	.250
	Pinterest (Presence)	-34.479	29.658	-.152	-1.163	.253
	Flickr (Presence)	-22.773	29.409	-.094	-.774	.444
	No_Outliers_TA_Rating	15.437	21.401	.073	.721	.476
	No_Outliers_TA_Reviews	.010	.018	.086	.573	.570
	Total Number of Social Media Sites (Out of 7)	-51.910	18.879	-.655	-2.750	.009
4	(Constant)	279.235	162.234		1.721	.094
	Social Media Staff	4.578	5.393	.094	.849	.402
	No_Outliers_Number_of_Tweets	.010	.014	.145	.705	.485
	No_Outliers_Twitter_Followers	.070	.019	.695	3.702	.001
	No_Outliers_FB_Likes	.010	.005	.474	1.836	.075
	No_Outliers_FB_Talking_About	.077	.074	.317	1.038	.306

	No_Outliers_FB_Checkins	-.001	.001	-.210	-.828	.414
	YouTube (Presence)	-98.715	36.159	-.339	-2.730	.010
	No_Outliers_YouTube_Videos	-.045	.024	-.300	-1.915	.064
	FourSquare (Presence)	30.327	43.925	.104	.690	.494
	No_Outliers_FourSquare_Score	6.192	4.787	.238	1.294	.204
	No_Outliers_FourSquare_Total_Visits	-.004	.003	-.168	-1.131	.266
	Pinterest (Presence)	-33.935	29.358	-.149	-1.156	.256
	Flickr (Presence)	-20.414	28.839	-.084	-.708	.484
	No_Outliers_TA_Rating	16.046	21.169	.076	.758	.454
	Total Number of Social Media Sites (Out of 7)	-51.728	18.694	-.653	-2.767	.009
5	(Constant)	320.114	149.943		2.135	.040
	Social Media Staff	5.603	5.147	.115	1.089	.284
	No_Outliers_Number_of_Tweets	.011	.014	.160	.786	.437
	No_Outliers_Twitter_Followers	.069	.019	.682	3.678	.001
	No_Outliers_FB_Likes	.011	.005	.507	2.019	.051
	No_Outliers_FB_Talking_About	.072	.073	.297	.983	.332
	No_Outliers_FB_Checkins	-.001	.001	-.189	-.755	.455
	YouTube (Presence)	-98.615	35.895	-.339	-2.747	.009
	No_Outliers_YouTube_Videos	-.050	.023	-.329	-2.187	.035
	No_Outliers_FourSquare_Score	4.220	3.813	.162	1.107	.276
	No_Outliers_FourSquare_Total_Visits	-.004	.003	-.172	-1.168	.251
	Pinterest (Presence)	-42.399	26.481	-.187	-1.601	.118
	Flickr (Presence)	-29.655	25.358	-.122	-1.169	.250
	No_Outliers_TA_Rating	14.876	20.947	.071	.710	.482

	Total Number of Social Media Sites (Out of 7)	-55.297	17.834	-.698	-3.101	.004
6	(Constant)	400.777	97.228		4.122	.000
	Social Media Staff	5.916	5.093	.121	1.161	.253
	No_Outliers_Number_of_Tweets	.010	.014	.151	.751	.457
	No_Outliers_Twitter_Followers	.069	.019	.686	3.728	.001
	No_Outliers_FB_Likes	.011	.005	.535	2.171	.036
	No_Outliers_FB_Talking_About	.067	.072	.279	.934	.357
	No_Outliers_FB_Checkins	-.001	.001	-.170	-.686	.497
	YouTube (Presence)	-99.358	35.639	-.342	-2.788	.008
	No_Outliers_YouTube_Videos	-.050	.022	-.334	-2.239	.031
	No_Outliers_FourSquare_Score	3.603	3.688	.138	.977	.335
	No_Outliers_FourSquare_Total_Visits	-.004	.003	-.178	-1.219	.231
	Pinterest (Presence)	-47.611	25.273	-.209	-1.884	.067
	Flickr (Presence)	-34.459	24.274	-.142	-1.420	.164
	Total Number of Social Media Sites (Out of 7)	-57.738	17.382	-.729	-3.322	.002
7	(Constant)	388.946	95.017		4.093	.000
	Social Media Staff	6.036	5.055	.124	1.194	.240
	No_Outliers_Number_of_Tweets	.007	.013	.102	.545	.589
	No_Outliers_Twitter_Followers	.070	.018	.694	3.809	.000
	No_Outliers_FB_Likes	.012	.005	.554	2.277	.029
	No_Outliers_FB_Talking_About	.030	.047	.124	.638	.527
	YouTube (Presence)	-95.714	34.994	-.329	-2.735	.009
	No_Outliers_YouTube_Videos	-.043	.020	-.288	-2.177	.036

	No_Outliers_FourSquare_Score	3.763	3.655	.145	1.030	.310
	No_Outliers_FourSquare_Total_Visits	-.005	.003	-.230	-1.871	.069
	Pinterest (Presence)	-45.636	24.933	-.201	-1.830	.075
	Flickr (Presence)	-34.413	24.105	-.142	-1.428	.162
	Total Number of Social Media Sites (Out of 7)	-56.058	17.089	-.707	-3.280	.002
8	(Constant)	384.843	93.861		4.100	.000
	Social Media Staff	5.918	5.004	.121	1.183	.244
	No_Outliers_Twitter_Followers	.077	.014	.759	5.503	.000
	No_Outliers_FB_Likes	.012	.005	.591	2.547	.015
	No_Outliers_FB_Talking_About	.019	.042	.079	.454	.652
	YouTube (Presence)	-95.758	34.678	-.329	-2.761	.009
	No_Outliers_YouTube_Videos	-.040	.019	-.264	-2.136	.039
	No_Outliers_FourSquare_Score	3.734	3.621	.143	1.031	.309
	No_Outliers_FourSquare_Total_Visits	-.005	.003	-.220	-1.825	.076
	Pinterest (Presence)	-44.725	24.651	-.197	-1.814	.077
	Flickr (Presence)	-35.256	23.837	-.145	-1.479	.147
	Total Number of Social Media Sites (Out of 7)	-55.401	16.892	-.699	-3.280	.002
9	(Constant)	381.174	92.580		4.117	.000
	Social Media Staff	5.693	4.930	.117	1.155	.255
	No_Outliers_Twitter_Followers	.075	.013	.746	5.586	.000
	No_Outliers_FB_Likes	.014	.003	.667	4.237	.000
	YouTube (Presence)	-95.543	34.329	-.328	-2.783	.008
	No_Outliers_YouTube_Videos	-.041	.018	-.269	-2.219	.032
	No_Outliers_FourSquare_Score	3.472	3.539	.133	.981	.332

	No_Outliers_FourSquare_Total_Visits	-.004	.002	-.211	-1.793	.081
	Pinterest (Presence)	-43.920	24.342	-.193	-1.804	.079
	Flickr (Presence)	-34.479	23.538	-.142	-1.465	.151
	Total Number of Social Media Sites (Out of 7)	-54.381	16.574	-.686	-3.281	.002
10	(Constant)	366.284	91.286		4.013	.000
	Social Media Staff	5.114	4.892	.105	1.045	.302
	No_Outliers_Twitter_Followers	.073	.013	.719	5.503	.000
	No_Outliers_FB_Likes	.015	.003	.689	4.427	.000
	YouTube (Presence)	-99.504	34.075	-.342	-2.920	.006
	No_Outliers_YouTube_Videos	-.042	.018	-.282	-2.334	.025
	No_Outliers_FourSquare_Total_Visits	-.004	.002	-.187	-1.623	.112
	Pinterest (Presence)	-48.377	23.904	-.213	-2.024	.050
	Flickr (Presence)	-31.885	23.379	-.131	-1.364	.180
	Total Number of Social Media Sites (Out of 7)	-47.878	15.185	-.604	-3.153	.003
11	(Constant)	372.589	91.187		4.086	.000
	No_Outliers_Twitter_Followers	.073	.013	.720	5.502	.000
	No_Outliers_FB_Likes	.016	.003	.736	4.925	.000
	YouTube (Presence)	-96.464	33.988	-.332	-2.838	.007
	No_Outliers_YouTube_Videos	-.040	.018	-.268	-2.233	.031
	No_Outliers_FourSquare_Total_Visits	-.004	.002	-.191	-1.665	.103
	Pinterest (Presence)	-48.905	23.925	-.215	-2.044	.047
	Flickr (Presence)	-30.457	23.365	-.125	-1.304	.199
	Total Number of Social Media Sites (Out of 7)	-46.841	15.169	-.591	-3.088	.004
12	(Constant)	315.262	80.528		3.915	.000

	No_Outliers_Twitter_Followers	.069	.013	.685	5.305	.000
	No_Outliers_FB_Likes	.015	.003	.729	4.842	.000
	YouTube (Presence)	-85.198	33.137	-.293	-2.571	.014
	No_Outliers_YouTube_Videos	-.039	.018	-.261	-2.156	.037
	No_Outliers_FourSquare_Total_Visits	-.004	.002	-.186	-1.603	.116
	Pinterest (Presence)	-40.209	23.162	-.177	-1.736	.090
	Total Number of Social Media Sites (Out of 7)	-38.070	13.705	-.480	-2.778	.008
13	(Constant)	330.898	81.347		4.068	.000
	No_Outliers_Twitter_Followers	.066	.013	.655	5.041	.000
	No_Outliers_FB_Likes	.014	.003	.672	4.513	.000
	YouTube (Presence)	-84.391	33.719	-.290	-2.503	.016
	No_Outliers_YouTube_Videos	-.039	.019	-.261	-2.120	.040
	Pinterest (Presence)	-36.692	23.465	-.161	-1.564	.125
	Total Number of Social Media Sites (Out of 7)	-42.203	13.698	-.533	-3.081	.004
14	(Constant)	266.550	71.288		3.739	.001
	No_Outliers_Twitter_Followers	.063	.013	.626	4.792	.000
	No_Outliers_FB_Likes	.014	.003	.677	4.476	.000
	YouTube (Presence)	-71.116	33.152	-.244	-2.145	.037
	No_Outliers_YouTube_Videos	-.043	.019	-.283	-2.275	.028
	Total Number of Social Media Sites (Out of 7)	-32.148	12.287	-.406	-2.616	.012

a. Dependent Variable: No_Outliers_RevPAR

Hypothesis 2

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	15.688	137.494		.114	.910
	Social Media Staff	.818	4.305	.040	.190	.850
	No_Outliers_Number_of_Tweets	-.007	.012	-.252	-.577	.568
	No_Outliers_Twitter_Following	-.009	.035	-.108	-.268	.791
	No_Outliers_Twitter_Followers	-.003	.018	-.067	-.157	.876
	Facebook (Participation)	-11.893	27.098	-.098	-.439	.664
	No_Outliers_FB_Likes	.001	.005	.076	.136	.893
	No_Outliers_FB_Talking_About	-.005	.060	-.046	-.078	.938
	No_Outliers_FB_Checkins	.000	.001	.268	.523	.605
	YouTube (Presence)	1.726	28.846	.014	.060	.953
	No_Outliers_YouTube_Videos	.006	.021	.091	.270	.789
	FourSquare (Presence)	1.585	36.867	.013	.043	.966
	No_Outliers_FourSquare_Score	.442	3.912	.041	.113	.911
	No_Outliers_FourSquare_Total_Visits	-.002	.003	-.238	-.821	.418
	Pinterest (Presence)	8.640	24.366	.091	.355	.725
	Flickr (Presence)	3.509	23.962	.035	.146	.885
	No_Outliers_TA_Rating	-.397	16.985	-.005	-.023	.982
	No_Outliers_TA_Reviews	-.001	.015	-.024	-.080	.937
	Total Number of Social Media Sites (Out of 7)	4.252	16.612	.129	.256	.800
2	(Constant)	13.444	96.879		.139	.890
	Social Media Staff	.807	4.215	.040	.192	.849
	No_Outliers_Number_of_Tweets	-.007	.012	-.252	-.586	.562

	No_Outliers_Twitter_Following	-.009	.035	-.107	-.271	.788
	No_Outliers_Twitter_Followers	-.003	.018	-.068	-.162	.873
	Facebook (Participation)	-11.880	26.679	-.098	-.445	.659
	No_Outliers_FB_Likes	.001	.005	.075	.137	.892
	No_Outliers_FB_Talking_About	-.005	.059	-.045	-.078	.939
	No_Outliers_FB_Checkins	.000	.001	.266	.532	.598
	YouTube (Presence)	1.740	28.400	.014	.061	.952
	No_Outliers_YouTube_Videos	.006	.021	.091	.276	.784
	FourSquare (Presence)	1.667	36.140	.014	.046	.963
	No_Outliers_FourSquare_Score	.463	3.740	.043	.124	.902
	No_Outliers_FourSquare_Total_Visits	-.002	.003	-.237	-.834	.411
	Pinterest (Presence)	8.806	22.958	.093	.384	.704
	Flickr (Presence)	3.661	22.707	.036	.161	.873
	No_Outliers_TA_Reviews	-.001	.014	-.024	-.083	.934
	Total Number of Social Media Sites (Out of 7)	4.326	16.055	.131	.269	.789
3	(Constant)	15.726	82.070		.192	.849
	Social Media Staff	.860	4.000	.042	.215	.831
	No_Outliers_Number_of_Tweets	-.007	.012	-.251	-.593	.557
	No_Outliers_Twitter_Following	-.009	.034	-.108	-.279	.782
	No_Outliers_Twitter_Followers	-.003	.017	-.068	-.165	.870
	Facebook (Participation)	-12.231	25.193	-.101	-.485	.630
	No_Outliers_FB_Likes	.001	.005	.077	.144	.887
	No_Outliers_FB_Talking_About	-.005	.058	-.048	-.084	.933
	No_Outliers_FB_Checkins	.000	.001	.270	.555	.583
	YouTube (Presence)	1.762	27.976	.015	.063	.950

	No_Outliers_YouTube_Videos	.006	.020	.089	.277	.784
	No_Outliers_FourSquare_Score	.373	3.132	.034	.119	.906
	No_Outliers_FourSquare_Total_Visits	-.002	.002	-.239	-.854	.399
	Pinterest (Presence)	8.320	20.094	.088	.414	.681
	Flickr (Presence)	3.131	19.297	.031	.162	.872
	No_Outliers_TA_Reviews	-.001	.014	-.023	-.082	.935
	Total Number of Social Media Sites (Out of 7)	4.065	14.805	.123	.275	.785
4	(Constant)	18.845	64.505		.292	.772
	Social Media Staff	.877	3.934	.043	.223	.825
	No_Outliers_Number_of_Tweets	-.007	.012	-.250	-.600	.552
	No_Outliers_Twitter_Following	-.009	.034	-.107	-.280	.781
	No_Outliers_Twitter_Followers	-.003	.017	-.063	-.158	.876
	Facebook (Participation)	-12.222	24.832	-.101	-.492	.626
	No_Outliers_FB_Likes	.001	.005	.080	.152	.880
	No_Outliers_FB_Talking_About	-.004	.057	-.044	-.079	.937
	No_Outliers_FB_Checkins	.000	.001	.266	.559	.579
	No_Outliers_YouTube_Videos	.005	.019	.085	.273	.786
	No_Outliers_FourSquare_Score	.351	3.069	.032	.114	.910
	No_Outliers_FourSquare_Total_Visits	-.002	.002	-.237	-.864	.393
	Pinterest (Presence)	7.916	18.775	.084	.422	.676
	Flickr (Presence)	2.847	18.494	.028	.154	.879
	No_Outliers_TA_Reviews	-.001	.014	-.024	-.086	.932
	Total Number of Social Media Sites (Out of 7)	3.584	12.499	.108	.287	.776
5	(Constant)	19.365	63.277		.306	.761
	Social Media Staff	.890	3.876	.044	.230	.820

	No_Outliers_Number_of_Tweets	-.007	.010	-.232	-.678	.502
	No_Outliers_Twitter_Following	-.010	.032	-.113	-.306	.762
	No_Outliers_Twitter_Followers	-.003	.017	-.065	-.164	.870
	Facebook (Participation)	-12.054	24.397	-.099	-.494	.624
	No_Outliers_FB_Likes	.000	.004	.056	.132	.896
	No_Outliers_FB_Checkins	.000	.001	.240	.701	.488
	No_Outliers_YouTube_Videos	.005	.018	.077	.266	.792
	No_Outliers_FourSquare_Score	.354	3.026	.033	.117	.908
	No_Outliers_FourSquare_Total_Visits	-.002	.002	-.231	-.891	.379
	Pinterest (Presence)	7.747	18.393	.082	.421	.676
	Flickr (Presence)	2.884	18.231	.028	.158	.875
	No_Outliers_TA_Reviews	-.001	.014	-.023	-.085	.933
	Total Number of Social Media Sites (Out of 7)	3.487	12.266	.106	.284	.778
6	(Constant)	18.599	61.786		.301	.765
	Social Media Staff	.871	3.817	.043	.228	.821
	No_Outliers_Number_of_Tweets	-.007	.009	-.232	-.691	.494
	No_Outliers_Twitter_Following	-.010	.032	-.116	-.320	.751
	No_Outliers_Twitter_Followers	-.003	.016	-.068	-.175	.862
	Facebook (Participation)	-11.558	23.368	-.095	-.495	.624
	No_Outliers_FB_Likes	.000	.004	.056	.134	.894
	No_Outliers_FB_Checkins	.000	.001	.233	.712	.481
	No_Outliers_YouTube_Videos	.004	.017	.068	.255	.800
	No_Outliers_FourSquare_Score	.316	2.953	.029	.107	.915
	No_Outliers_FourSquare_Total_Visits	-.002	.002	-.232	-.908	.370

	Pinterest (Presence)	7.831	18.118	.083	.432	.668
	Flickr (Presence)	2.798	17.957	.028	.156	.877
	Total Number of Social Media Sites (Out of 7)	3.612	12.013	.109	.301	.765
7	(Constant)	15.770	55.124		.286	.776
	Social Media Staff	.822	3.741	.040	.220	.827
	No_Outliers_Number_of_Tweets	-.006	.009	-.229	-.692	.493
	No_Outliers_Twitter_Following	-.010	.031	-.119	-.334	.740
	No_Outliers_Twitter_Followers	-.003	.016	-.075	-.201	.842
	Facebook (Participation)	-10.657	21.515	-.088	-.495	.623
	No_Outliers_FB_Likes	.001	.004	.065	.160	.873
	No_Outliers_FB_Checkins	.000	.001	.228	.714	.480
	No_Outliers_YouTube_Videos	.004	.016	.061	.240	.812
	No_Outliers_FourSquare_Total_Visits	-.002	.002	-.224	-.928	.359
	Pinterest (Presence)	7.662	17.812	.081	.430	.669
	Flickr (Presence)	3.191	17.347	.032	.184	.855
	Total Number of Social Media Sites (Out of 7)	4.431	9.142	.134	.485	.631
8	(Constant)	14.786	54.093		.273	.786
	Social Media Staff	.973	3.576	.048	.272	.787
	No_Outliers_Number_of_Tweets	-.006	.009	-.219	-.683	.498
	No_Outliers_Twitter_Following	-.013	.027	-.147	-.482	.633
	No_Outliers_Twitter_Followers	-.002	.014	-.052	-.152	.880
	Facebook (Participation)	-11.294	20.878	-.093	-.541	.592
	No_Outliers_FB_Checkins	.000	.000	.263	1.131	.265
	No_Outliers_YouTube_Videos	.005	.013	.085	.411	.683
	No_Outliers_FourSquare_Total_Visits	-.002	.002	-.228	-.963	.341
	Pinterest (Presence)	7.366	17.493	.078	.421	.676

	Flickr (Presence)	3.124	17.124	.031	.182	.856
	Total Number of Social Media Sites (Out of 7)	4.557	8.995	.138	.507	.615
9	(Constant)	16.734	51.912		.322	.749
	Social Media Staff	.899	3.499	.044	.257	.799
	No_Outliers_Number_of_Tweets	-.007	.008	-.239	-.821	.416
	No_Outliers_Twitter_Following	-.015	.023	-.170	-.645	.523
	Facebook (Participation)	-11.466	20.592	-.095	-.557	.581
	No_Outliers_FB_Checkins	.000	.000	.261	1.138	.262
	No_Outliers_YouTube_Videos	.005	.013	.087	.428	.671
	No_Outliers_FourSquare_Total_Visits	-.002	.002	-.227	-.972	.337
	Pinterest (Presence)	7.212	17.250	.076	.418	.678
	Flickr (Presence)	2.879	16.839	.028	.171	.865
	Total Number of Social Media Sites (Out of 7)	4.215	8.603	.128	.490	.627
1	(Constant)	20.428	46.640		.438	.664
0	Social Media Staff	.921	3.455	.045	.267	.791
	No_Outliers_Number_of_Tweets	-.007	.008	-.242	-.845	.403
	No_Outliers_Twitter_Following	-.014	.023	-.165	-.637	.528
	Facebook (Participation)	-11.764	20.273	-.097	-.580	.565
	No_Outliers_FB_Checkins	.000	.000	.261	1.152	.256
	No_Outliers_YouTube_Videos	.006	.013	.089	.444	.660
	No_Outliers_FourSquare_Total_Visits	-.002	.002	-.229	-.992	.327
	Pinterest (Presence)	6.564	16.627	.069	.395	.695
	Total Number of Social Media Sites (Out of 7)	3.662	7.877	.111	.465	.644
1	(Constant)	22.552	45.444		.496	.622
1	No_Outliers_Number_of_Tweets	-.007	.008	-.237	-.836	.408

	No_Outliers_Twitter_Following	-.015	.022	-.168	-.659	.513
	Facebook (Participation)	-12.492	19.865	-.103	-.629	.533
	No_Outliers_FB_Checkins	.000	.000	.268	1.208	.234
	No_Outliers_YouTube_Videos	.007	.012	.103	.545	.589
	No_Outliers_FourSquare_Total_Visits	-.002	.002	-.231	-1.012	.318
	Pinterest (Presence)	6.152	16.371	.065	.376	.709
	Total Number of Social Media Sites (Out of 7)	3.724	7.786	.113	.478	.635
1	(Constant)	31.017	39.073		.794	.432
2	No_Outliers_Number_of_Tweets	-.006	.008	-.230	-.825	.414
	No_Outliers_Twitter_Following	-.015	.022	-.170	-.670	.506
	Facebook (Participation)	-13.789	19.367	-.114	-.712	.480
	No_Outliers_FB_Checkins	.000	.000	.270	1.226	.227
	No_Outliers_YouTube_Videos	.007	.012	.117	.631	.532
	No_Outliers_FourSquare_Total_Visits	-.002	.002	-.240	-1.069	.291
	Total Number of Social Media Sites (Out of 7)	2.454	6.944	.074	.353	.726
1	(Constant)	44.577	7.305		6.102	.000
3	No_Outliers_Number_of_Tweets	-.006	.008	-.211	-.778	.441
	No_Outliers_Twitter_Following	-.014	.022	-.164	-.656	.515
	Facebook (Participation)	-15.805	18.323	-.130	-.863	.393
	No_Outliers_FB_Checkins	.001	.000	.281	1.305	.199
	No_Outliers_YouTube_Videos	.007	.012	.117	.642	.524
	No_Outliers_FourSquare_Total_Visits	-.002	.002	-.220	-1.023	.312
1	(Constant)	45.686	7.051		6.479	.000

4	No_Outliers_Number_of_Tweets	-.004	.007	-.125	-.533	.597
	No_Outliers_Twitter_Following	-.018	.021	-.206	-.862	.393
	Facebook (Participation)	-12.980	17.670	-.107	-.735	.466
	No_Outliers_FB_Checkins	.001	.000	.307	1.461	.151
	No_Outliers_FourSquare_Total_Visits	-.002	.002	-.213	-.998	.324
15	(Constant)	45.447	6.982		6.509	.000
	No_Outliers_Twitter_Following	-.026	.015	-.294	-1.710	.094
	Facebook (Participation)	-12.610	17.518	-.104	-.720	.475
	No_Outliers_FB_Checkins	.001	.000	.310	1.489	.143
	No_Outliers_FourSquare_Total_Visits	-.002	.002	-.234	-1.126	.266
16	(Constant)	43.542	6.428		6.774	.000
	No_Outliers_Twitter_Following	-.025	.015	-.289	-1.692	.097
	No_Outliers_FB_Checkins	.001	.000	.321	1.552	.127
	No_Outliers_FourSquare_Total_Visits	-.002	.002	-.218	-1.061	.294
17	(Constant)	40.959	5.956		6.877	.000
	No_Outliers_Twitter_Following	-.029	.015	-.336	-2.026	.048
	No_Outliers_FB_Checkins	.000	.000	.189	1.144	.258
18	(Constant)	43.811	5.426		8.074	.000
	No_Outliers_Twitter_Following	-.020	.012	-.232	-1.667	.102
19	(Constant)	38.836	4.611		8.422	.000

a. Dependent Variable: No_Outliers_Percentage_Recycled

Hypothesis 3

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	803.896	1056.949		.761	.452
	Social Media Staff	73.877	33.096	.340	2.232	.033
	No_Outliers_Number_of_Tweets	-.016	.095	-.055	-.173	.864
	No_Outliers_Twitter_Following	-.591	.272	-.631	-2.169	.038
	No_Outliers_Twitter_Followers	.363	.138	.808	2.626	.013
	Facebook (Participation)	-192.634	208.312	-.149	-.925	.362
	No_Outliers_FB_Likes	-.014	.038	-.151	-.375	.710
	No_Outliers_FB_Talking_About	-.087	.462	-.081	-.187	.853
	No_Outliers_FB_Checkins	.011	.007	.576	1.560	.129
	YouTube (Presence)	-86.834	221.745	-.067	-.392	.698
	No_Outliers_YouTube_Videos	-.025	.163	-.038	-.155	.878
	FourSquare (Presence)	-244.956	283.407	-.189	-.864	.394
	No_Outliers_FourSquare_Score	41.509	30.070	.358	1.380	.177
	No_Outliers_FourSquare_Total_Visits	-.024	.020	-.249	-1.195	.241
	Pinterest (Presence)	-167.336	187.307	-.165	-.893	.378
	Flickr (Presence)	-228.885	184.203	-.212	-1.243	.223
	No_Outliers_TA_Rating	36.784	130.567	.039	.282	.780
	No_Outliers_TA_Reviews	.024	.113	.045	.211	.834

	Total Number of Social Media Sites (Out of 7)	-176.147	127.699	-.500	-1.379	.177
2	(Constant)	785.128	1034.318		.759	.453
	Social Media Staff	73.408	32.466	.338	2.261	.030
	No_Outliers_Number_of_Tweets	-.022	.087	-.072	-.249	.805
	No_Outliers_Twitter_Following	-.591	.268	-.631	-2.204	.035
	No_Outliers_Twitter_Followers	.368	.132	.820	2.794	.009
	Facebook (Participation)	-204.520	190.740	-.158	-1.072	.291
	No_Outliers_FB_Likes	-.016	.036	-.168	-.439	.664
	No_Outliers_FB_Talking_About	-.109	.432	-.101	-.252	.803
	No_Outliers_FB_Checkins	.012	.006	.602	1.860	.072
	YouTube (Presence)	-79.129	212.859	-.061	-.372	.712
	FourSquare (Presence)	-238.557	276.194	-.184	-.864	.394
	No_Outliers_FourSquare_Score	42.937	28.191	.371	1.523	.137
	No_Outliers_FourSquare_Total_Visits	-.024	.019	-.257	-1.281	.209
	Pinterest (Presence)	-166.822	184.487	-.165	-.904	.372
	Flickr (Presence)	-227.101	181.103	-.210	-1.254	.219
	No_Outliers_TA_Rating	38.066	128.362	.041	.297	.769
	No_Outliers_TA_Reviews	.018	.104	.034	.172	.865
	Total Number of Social Media Sites (Out of 7)	-175.312	125.684	-.497	-1.395	.172
3	(Constant)	797.015	1017.165		.784	.439
	Social Media Staff	73.805	31.918	.340	2.312	.027
	No_Outliers_Number_of_Tweets	-.019	.085	-.065	-.229	.820

	No_Outliers_Twitter_Following	-.586	.262	-.625	-2.232	.032
	No_Outliers_Twitter_Followers	.368	.130	.820	2.836	.008
	Facebook (Participation)	-207.795	187.056	-.161	-1.111	.274
	No_Outliers_FB_Likes	-.015	.035	-.161	-.429	.670
	No_Outliers_FB_Talking_About	-.101	.424	-.094	-.239	.813
	No_Outliers_FB_Checkins	.012	.006	.603	1.892	.067
	YouTube (Presence)	-83.892	208.012	-.065	-.403	.689
	FourSquare (Presence)	-237.894	272.197	-.184	-.874	.388
	No_Outliers_FourSquare_Score	43.232	27.734	.373	1.559	.128
	No_Outliers_FourSquare_Total_Visits	-.024	.018	-.252	-1.288	.207
	Pinterest (Presence)	-167.400	181.805	-.166	-.921	.364
	Flickr (Presence)	-225.192	178.163	-.209	-1.264	.215
	No_Outliers_TA_Rating	38.892	126.428	.042	.308	.760
	Total Number of Social Media Sites (Out of 7)	-177.511	123.233	-.504	-1.440	.159
4	(Constant)	800.713	1003.179		.798	.430
	Social Media Staff	73.944	31.478	.341	2.349	.025
	No_Outliers_Twitter_Following	-.615	.226	-.656	-2.724	.010
	No_Outliers_Twitter_Followers	.362	.126	.807	2.888	.007
	Facebook (Participation)	-209.886	184.288	-.162	-1.139	.262
	No_Outliers_FB_Likes	-.020	.028	-.212	-.704	.486
	No_Outliers_FB_Talking_About	-.055	.368	-.051	-.149	.882
	No_Outliers_FB_Checkins	.012	.006	.597	1.905	.065
	YouTube (Presence)	-80.022	204.502	-.062	-.391	.698

	FourSquare (Presence)	-240.266	268.295	-.186	-.896	.377
	No_Outliers_FourSquare_Score	43.199	27.356	.373	1.579	.123
	No_Outliers_FourSquare_Total_Visits	-.024	.018	-.252	-1.305	.200
	Pinterest (Presence)	-172.784	177.827	-.171	-.972	.338
	Flickr (Presence)	-222.754	175.422	-.206	-1.270	.213
	No_Outliers_TA_Rating	39.464	124.681	.042	.317	.753
	Total Number of Social Media Sites (Out of 7)	-178.377	121.497	-.506	-1.468	.151
5	(Constant)	791.632	987.646		.802	.428
	Social Media Staff	73.754	31.022	.340	2.377	.023
	No_Outliers_Twitter_Following	-.614	.223	-.655	-2.758	.009
	No_Outliers_Twitter_Followers	.366	.122	.814	2.995	.005
	Facebook (Participation)	-208.889	181.650	-.161	-1.150	.258
	No_Outliers_FB_Likes	-.023	.021	-.240	-1.053	.300
	No_Outliers_FB_Checkins	.011	.004	.564	2.576	.014
	YouTube (Presence)	-82.293	201.148	-.064	-.409	.685
	FourSquare (Presence)	-231.703	258.521	-.179	-.896	.376
	No_Outliers_FourSquare_Score	44.051	26.390	.380	1.669	.104
	No_Outliers_FourSquare_Total_Visits	-.023	.017	-.244	-1.333	.191
	Pinterest (Presence)	-172.348	175.372	-.170	-.983	.332
	Flickr (Presence)	-220.914	172.597	-.205	-1.280	.209
	No_Outliers_TA_Rating	41.232	122.422	.044	.337	.738
	Total Number of Social Media Sites (Out of 7)	-179.225	119.705	-.508	-1.497	.143
6	(Constant)	1024.850	695.756		1.473	.149

	Social Media Staff	74.823	30.487	.345	2.454	.019
	No_Outliers_Twitter_Following	-.624	.218	-.666	-2.864	.007
	No_Outliers_Twitter_Followers	.370	.120	.824	3.088	.004
	Facebook (Participation)	-211.925	179.239	-.164	-1.182	.245
	No_Outliers_FB_Likes	-.022	.021	-.237	-1.054	.299
	No_Outliers_FB_Checkins	.011	.004	.575	2.693	.011
	YouTube (Presence)	-83.439	198.695	-.064	-.420	.677
	FourSquare (Presence)	-237.707	254.797	-.184	-.933	.357
	No_Outliers_FourSquare_Score	42.134	25.458	.364	1.655	.106
	No_Outliers_FourSquare_Total_Visits	-.023	.017	-.247	-1.368	.180
	Pinterest (Presence)	-189.831	165.495	-.188	-1.147	.259
	Flickr (Presence)	-236.145	164.560	-.219	-1.435	.160
	Total Number of Social Media Sites (Out of 7)	-187.318	115.855	-.531	-1.617	.114
7	(Constant)	878.526	595.653		1.475	.148
	Social Media Staff	74.353	30.134	.343	2.467	.018
	No_Outliers_Twitter_Following	-.623	.215	-.665	-2.893	.006
	No_Outliers_Twitter_Followers	.357	.115	.796	3.115	.003
	Facebook (Participation)	-206.291	176.789	-.159	-1.167	.251
	No_Outliers_FB_Likes	-.022	.021	-.238	-1.067	.293
	No_Outliers_FB_Checkins	.011	.004	.576	2.725	.010
	FourSquare (Presence)	-241.076	251.896	-.186	-.957	.345
	No_Outliers_FourSquare_Score	42.567	25.160	.367	1.692	.099
	No_Outliers_FourSquare_Total_Visits	-.023	.017	-.247	-1.381	.175

	Pinterest (Presence)	-169.246	156.347	-.167	-1.083	.286
	Flickr (Presence)	-222.532	159.578	-.206	-1.395	.171
	Total Number of Social Media Sites (Out of 7)	-164.104	100.707	-.465	-1.630	.111
8	(Constant)	524.070	466.009		1.125	.268
	Social Media Staff	66.802	29.052	.308	2.299	.027
	No_Outliers_Twitter_Following	-.613	.215	-.655	-2.854	.007
	No_Outliers_Twitter_Followers	.348	.114	.776	3.050	.004
	Facebook (Participation)	-142.993	163.774	-.110	-.873	.388
	No_Outliers_FB_Likes	-.022	.021	-.229	-1.030	.310
	No_Outliers_FB_Checkins	.011	.004	.542	2.605	.013
	No_Outliers_FourSquare_Score	54.485	21.838	.470	2.495	.017
	No_Outliers_FourSquare_Total_Visits	-.022	.017	-.233	-1.312	.197
	Pinterest (Presence)	-93.071	134.425	-.092	-.692	.493
	Flickr (Presence)	-142.021	135.457	-.131	-1.048	.301
	Total Number of Social Media Sites (Out of 7)	-121.119	90.039	-.344	-1.345	.186
9	(Constant)	391.084	421.812		.927	.359
	Social Media Staff	68.039	28.807	.314	2.362	.023
	No_Outliers_Twitter_Following	-.613	.214	-.654	-2.872	.007
	No_Outliers_Twitter_Followers	.345	.113	.768	3.044	.004
	Facebook (Participation)	-132.048	161.945	-.102	-.815	.420
	No_Outliers_FB_Likes	-.023	.021	-.244	-1.107	.275
	No_Outliers_FB_Checkins	.011	.004	.546	2.642	.012
	No_Outliers_FourSquare_Score	56.579	21.487	.488	2.633	.012

	No_Outliers_FourSquare_Total_Visits	-.021	.017	-.228	-1.289	.205
	Flickr (Presence)	-123.703	131.980	-.115	-.937	.354
	Total Number of Social Media Sites (Out of 7)	-104.295	86.132	-.296	-1.211	.233
10	(Constant)	237.373	375.799		.632	.531
	Social Media Staff	68.321	28.687	.315	2.382	.022
	No_Outliers_Twitter_Following	-.621	.212	-.663	-2.924	.006
	No_Outliers_Twitter_Followers	.339	.113	.754	3.008	.004
	No_Outliers_FB_Likes	-.023	.021	-.241	-1.102	.277
	No_Outliers_FB_Checkins	.011	.004	.546	2.652	.011
	No_Outliers_FourSquare_Score	51.007	20.288	.440	2.514	.016
	No_Outliers_FourSquare_Total_Visits	-.020	.017	-.213	-1.219	.230
	Flickr (Presence)	-111.717	130.622	-.103	-.855	.397
	Total Number of Social Media Sites (Out of 7)	-74.963	77.940	-.213	-.962	.342
11	(Constant)	104.225	340.941		.306	.761
	Social Media Staff	66.479	28.515	.306	2.331	.025
	No_Outliers_Twitter_Following	-.627	.212	-.669	-2.961	.005
	No_Outliers_Twitter_Followers	.332	.112	.740	2.965	.005
	No_Outliers_FB_Likes	-.022	.021	-.231	-1.061	.295
	No_Outliers_FB_Checkins	.011	.004	.539	2.628	.012
	No_Outliers_FourSquare_Score	47.705	19.853	.412	2.403	.021
	No_Outliers_FourSquare_Total_Visits	-.019	.016	-.202	-1.163	.251
	Total Number of Social Media Sites (Out of 7)	-50.506	72.272	-.143	-.699	.489

12	(Constant)	-118.663	119.753		-.991	.327
	Social Media Staff	64.741	28.237	.298	2.293	.027
	No_Outliers_Twitter_Following	-.638	.210	-.681	-3.043	.004
	No_Outliers_Twitter_Followers	.316	.109	.703	2.900	.006
	No_Outliers_FB_Likes	-.023	.020	-.243	-1.122	.268
	No_Outliers_FB_Checkins	.010	.004	.532	2.613	.012
	No_Outliers_FourSquare_Score	38.911	15.264	.336	2.549	.014
	No_Outliers_FourSquare_Total_Visits	-.020	.016	-.208	-1.206	.235
13	(Constant)	-79.374	114.850		-.691	.493
	Social Media Staff	52.027	25.937	.240	2.006	.051
	No_Outliers_Twitter_Following	-.549	.195	-.586	-2.820	.007
	No_Outliers_Twitter_Followers	.258	.096	.574	2.681	.010
	No_Outliers_FB_Checkins	.008	.003	.395	2.417	.020
	No_Outliers_FourSquare_Score	36.160	15.110	.312	2.393	.021
	No_Outliers_FourSquare_Total_Visits	-.019	.016	-.205	-1.184	.243
14	(Constant)	-64.438	114.664		-.562	.577
	Social Media Staff	50.582	26.024	.233	1.944	.050
	No_Outliers_Twitter_Following	-.576	.194	-.614	-2.965	.005
	No_Outliers_Twitter_Followers	.252	.097	.562	2.615	.012
	No_Outliers_FB_Checkins	.006	.003	.297	2.098	.042
	No_Outliers_FourSquare_Score	29.623	14.128	.256	2.097	.042

a. Dependent Variable: No_Outliers_Cost_of_Water_per_room

Hypothesis 4

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	40.030	303.167		.132	.896
	Social Media Staff	2.574	9.493	.051	.271	.788
	No_Outliers_Number_of_Tweets	.015	.027	.220	.566	.576
	No_Outliers_Twitter_Following	-.135	.078	-.621	-1.732	.093
	No_Outliers_Twitter_Followers	.068	.040	.649	1.710	.097
	Facebook (Participation)	-59.126	59.750	-.197	-.990	.330
	No_Outliers_FB_Likes	-.008	.011	-.387	-.776	.443
	No_Outliers_FB_Talking_About	.002	.133	.007	.013	.990
	No_Outliers_FB_Checkins	.000	.002	.029	.064	.949
	YouTube (Presence)	-26.832	63.604	-.089	-.422	.676
	No_Outliers_YouTube_Videos	.036	.047	.233	.778	.443
	FourSquare (Presence)	-23.191	81.290	-.077	-.285	.777
	No_Outliers_FourSquare_Score	9.666	8.625	.359	1.121	.271
	No_Outliers_FourSquare_Total_Visits	-.005	.006	-.206	-.798	.431
	Pinterest (Presence)	-41.476	53.726	-.177	-.772	.446
	Flickr (Presence)	-50.218	52.835	-.200	-.950	.349
	No_Outliers_TA_Rating	32.144	37.451	.148	.858	.397
	No_Outliers_TA_Reviews	-.011	.032	-.087	-.332	.742
	Total Number of Social Media Sites (Out of 7)	-17.182	36.628	-.210	-.469	.642
2	(Constant)	40.030	298.539		.134	.894

	Social Media Staff	2.573	9.348	.051	.275	.785
	No_Outliers_Number_of_Tweets	.015	.023	.217	.674	.505
	No_Outliers_Twitter_Following	-.135	.076	-.621	-1.783	.084
	No_Outliers_Twitter_Followers	.068	.039	.649	1.738	.092
	Facebook (Participation)	-59.214	58.456	-.197	-1.013	.318
	No_Outliers_FB_Likes	-.008	.009	-.383	-.950	.349
	No_Outliers_FB_Checkins	.000	.001	.033	.103	.919
	YouTube (Presence)	-26.743	62.269	-.089	-.429	.670
	No_Outliers_YouTube_Videos	.036	.044	.234	.836	.409
	FourSquare (Presence)	-23.312	79.524	-.078	-.293	.771
	No_Outliers_FourSquare_Score	9.658	8.471	.359	1.140	.262
	No_Outliers_FourSquare_Total_Visits	-.005	.005	-.207	-.855	.399
	Pinterest (Presence)	-41.440	52.835	-.176	-.784	.438
	Flickr (Presence)	-50.267	51.897	-.200	-.969	.340
	No_Outliers_TA_Rating	32.109	36.785	.148	.873	.389
	No_Outliers_TA_Reviews	-.011	.032	-.087	-.337	.738
	Total Number of Social Media Sites (Out of 7)	-17.146	35.966	-.209	-.477	.637
3	(Constant)	36.056	291.679		.124	.902
	Social Media Staff	2.436	9.117	.048	.267	.791
	No_Outliers_Number_of_Tweets	.015	.022	.209	.679	.502
	No_Outliers_Twitter_Following	-.132	.068	-.606	-1.940	.061
	No_Outliers_Twitter_Followers	.067	.037	.641	1.788	.083
	Facebook (Participation)	-57.975	56.358	-.193	-1.029	.311

	No_Outliers_FB_Likes	-.008	.007	-.356	-1.174	.249
	YouTube (Presence)	-27.338	61.090	-.091	-.448	.657
	No_Outliers_YouTube_Videos	.035	.040	.224	.867	.392
	FourSquare (Presence)	-22.297	77.751	-.074	-.287	.776
	No_Outliers_FourSquare_Score	9.611	8.335	.357	1.153	.257
	No_Outliers_FourSquare_Total_Visits	-.004	.005	-.196	-.914	.367
	Pinterest (Presence)	-40.755	51.644	-.173	-.789	.435
	Flickr (Presence)	-49.812	50.950	-.198	-.978	.335
	No_Outliers_TA_Rating	32.519	36.032	.149	.903	.373
	No_Outliers_TA_Reviews	-.010	.030	-.081	-.327	.746
	Total Number of Social Media Sites (Out of 7)	-16.725	35.208	-.204	-.475	.638
4	(Constant)	25.768	285.267		.090	.929
	No_Outliers_Number_of_Tweets	.014	.021	.207	.680	.501
	No_Outliers_Twitter_Following	-.132	.067	-.608	-1.972	.057
	No_Outliers_Twitter_Followers	.067	.037	.642	1.816	.078
	Facebook (Participation)	-57.529	55.581	-.191	-1.035	.308
	No_Outliers_FB_Likes	-.007	.006	-.342	-1.160	.254
	YouTube (Presence)	-26.110	60.104	-.087	-.434	.667
	No_Outliers_YouTube_Videos	.037	.039	.235	.931	.358
	FourSquare (Presence)	-16.769	73.947	-.056	-.227	.822
	No_Outliers_FourSquare_Score	9.787	8.198	.364	1.194	.241
	No_Outliers_FourSquare_Total_Visits	-.004	.005	-.197	-.930	.359
	Pinterest (Presence)	-39.337	50.684	-.167	-.776	.443

	Flickr (Presence)	-47.070	49.239	-.188	-.956	.346
	No_Outliers_TA_Rating	33.429	35.391	.154	.945	.351
	No_Outliers_TA_Reviews	-.010	.030	-.080	-.330	.743
	Total Number of Social Media Sites (Out of 7)	-14.983	34.136	-.183	-.439	.663
5	(Constant)	-.534	257.165		-.002	.998
	No_Outliers_Number_of_Tweets	.014	.021	.196	.662	.512
	No_Outliers_Twitter_Following	-.131	.066	-.604	-1.989	.054
	No_Outliers_Twitter_Followers	.067	.036	.645	1.851	.072
	Facebook (Participation)	-54.254	52.960	-.180	-1.024	.312
	No_Outliers_FB_Likes	-.008	.006	-.357	-1.256	.217
	YouTube (Presence)	-26.268	59.303	-.087	-.443	.660
	No_Outliers_YouTube_Videos	.039	.038	.247	1.021	.314
	No_Outliers_FourSquare_Score	10.791	6.808	.401	1.585	.122
	No_Outliers_FourSquare_Total_Visits	-.004	.005	-.196	-.938	.354
	Pinterest (Presence)	-34.077	44.466	-.145	-.766	.448
	Flickr (Presence)	-41.767	42.756	-.166	-.977	.335
	No_Outliers_TA_Rating	33.848	34.874	.156	.971	.338
	No_Outliers_TA_Reviews	-.011	.030	-.086	-.360	.721
	Total Number of Social Media Sites (Out of 7)	-12.399	31.752	-.151	-.391	.698
6	(Constant)	-4.009	253.942		-.016	.987
	No_Outliers_Number_of_Tweets	.014	.020	.199	.680	.501
	No_Outliers_Twitter_Following	-.137	.064	-.629	-2.157	.038

	No_Outliers_Twitter_Followers	.067	.036	.640	1.860	.071
	Facebook (Participation)	-50.311	51.199	-.167	-.983	.332
	No_Outliers_FB_Likes	-.008	.006	-.380	-1.389	.173
	YouTube (Presence)	-24.824	58.466	-.083	-.425	.674
	No_Outliers_YouTube_Videos	.035	.036	.222	.969	.339
	No_Outliers_FourSquare_Score	10.505	6.681	.390	1.572	.124
	No_Outliers_FourSquare_Total_Visits	-.005	.004	-.208	-1.027	.311
	Pinterest (Presence)	-33.579	43.919	-.143	-.765	.449
	Flickr (Presence)	-42.780	42.159	-.170	-1.015	.317
	No_Outliers_TA_Rating	32.831	34.348	.151	.956	.345
	Total Number of Social Media Sites (Out of 7)	-11.277	31.224	-.138	-.361	.720
7	(Constant)	-74.634	160.138		-.466	.644
	No_Outliers_Number_of_Tweets	.014	.020	.206	.714	.480
	No_Outliers_Twitter_Following	-.139	.063	-.639	-2.223	.032
	No_Outliers_Twitter_Followers	.062	.033	.599	1.867	.070
	Facebook (Participation)	-43.157	46.670	-.144	-.925	.361
	No_Outliers_FB_Likes	-.009	.006	-.393	-1.469	.150
	YouTube (Presence)	-14.062	49.723	-.047	-.283	.779
	No_Outliers_YouTube_Videos	.034	.035	.221	.976	.335
	No_Outliers_FourSquare_Score	9.495	5.998	.353	1.583	.122
	No_Outliers_FourSquare_Total_Visits	-.005	.004	-.207	-1.031	.309
	Pinterest (Presence)	-26.748	39.181	-.114	-.683	.499
	Flickr (Presence)	-35.315	36.321	-.141	-.972	.337

	No_Outliers_TA_Rating	35.015	33.422	.161	1.048	.301
8	(Constant)	-78.081	157.779		-.495	.623
	No_Outliers_Number_of_Tweets	.014	.020	.205	.716	.478
	No_Outliers_Twitter_Following	-.139	.062	-.636	-2.242	.031
	No_Outliers_Twitter_Followers	.062	.033	.592	1.873	.069
	Facebook (Participation)	-46.272	44.814	-.154	-1.033	.308
	No_Outliers_FB_Likes	-.009	.006	-.402	-1.529	.134
	No_Outliers_YouTube_Videos	.037	.034	.237	1.094	.281
	No_Outliers_FourSquare_Score	10.211	5.374	.379	1.900	.065
	No_Outliers_FourSquare_Total_Visits	-.005	.004	-.207	-1.046	.302
	Pinterest (Presence)	-25.397	38.427	-.108	-.661	.513
	Flickr (Presence)	-35.468	35.886	-.141	-.988	.329
	No_Outliers_TA_Rating	34.441	32.965	.158	1.045	.303
9	(Constant)	-115.646	146.146		-.791	.433
	No_Outliers_Number_of_Tweets	.014	.020	.194	.684	.498
	No_Outliers_Twitter_Following	-.134	.061	-.617	-2.202	.033
	No_Outliers_Twitter_Followers	.062	.033	.596	1.899	.065
	Facebook (Participation)	-46.276	44.497	-.154	-1.040	.305
	No_Outliers_FB_Likes	-.009	.006	-.397	-1.524	.135
	No_Outliers_YouTube_Videos	.035	.033	.222	1.036	.307
	No_Outliers_FourSquare_Score	11.750	4.808	.437	2.444	.019
	No_Outliers_FourSquare_Total_Visits	-.004	.004	-.200	-1.019	.314
	Flickr (Presence)	-32.214	35.295	-.128	-.913	.367

	No_Outliers_TA_Rating	39.921	31.680	.183	1.260	.215
10	(Constant)	-119.002	145.114		-.820	.417
	No_Outliers_Twitter_Following	-.121	.057	-.554	-2.107	.041
	No_Outliers_Twitter_Followers	.071	.030	.676	2.339	.024
	Facebook (Participation)	-49.207	44.003	-.164	-1.118	.270
	No_Outliers_FB_Likes	-.009	.006	-.398	-1.537	.132
	No_Outliers_YouTube_Videos	.043	.031	.274	1.379	.176
	No_Outliers_FourSquare_Score	12.083	4.753	.449	2.542	.015
	No_Outliers_FourSquare_Total_Visits	-.005	.004	-.205	-1.052	.299
	Flickr (Presence)	-34.825	34.860	-.139	-.999	.324
	No_Outliers_TA_Rating	40.059	31.473	.184	1.273	.210
11	(Constant)	-150.709	141.597		-1.064	.293
	No_Outliers_Twitter_Following	-.120	.057	-.553	-2.103	.041
	No_Outliers_Twitter_Followers	.071	.030	.680	2.355	.023
	Facebook (Participation)	-52.261	43.895	-.174	-1.191	.241
	No_Outliers_FB_Likes	-.009	.006	-.396	-1.529	.134
	No_Outliers_YouTube_Videos	.044	.031	.281	1.415	.164
	No_Outliers_FourSquare_Score	12.688	4.714	.471	2.692	.010
	No_Outliers_FourSquare_Total_Visits	-.004	.004	-.192	-.985	.330
	No_Outliers_TA_Rating	45.247	31.041	.208	1.458	.152
12	(Constant)	-141.648	141.250		-1.003	.322
	No_Outliers_Twitter_Following	-.136	.055	-.623	-2.467	.018

	No_Outliers_Twitter_Followers	.073	.030	.699	2.426	.020
	Facebook (Participation)	-46.854	43.536	-.156	-1.076	.288
	No_Outliers_FB_Likes	-.010	.006	-.455	-1.806	.078
	No_Outliers_YouTube_Videos	.043	.031	.276	1.393	.171
	No_Outliers_FourSquare_Score	10.969	4.377	.408	2.506	.016
	No_Outliers_TA_Rating	43.666	30.989	.201	1.409	.166
13	(Constant)	-131.402	141.182		-.931	.357
	No_Outliers_Twitter_Following	-.131	.055	-.603	-2.390	.021
	No_Outliers_Twitter_Followers	.073	.030	.696	2.409	.020
	No_Outliers_FB_Likes	-.008	.005	-.366	-1.536	.132
	No_Outliers_YouTube_Videos	.032	.029	.205	1.094	.280
	No_Outliers_FourSquare_Score	10.516	4.365	.391	2.409	.020
	No_Outliers_TA_Rating	40.594	30.912	.187	1.313	.196
14	(Constant)	-101.624	138.836		-.732	.468
	No_Outliers_Twitter_Following	-.125	.055	-.573	-2.277	.028
	No_Outliers_Twitter_Followers	.069	.030	.664	2.307	.026
	No_Outliers_FB_Likes	-.004	.004	-.201	-1.087	.283
	No_Outliers_FourSquare_Score	9.404	4.254	.349	2.211	.032
	No_Outliers_TA_Rating	35.984	30.691	.165	1.172	.247
15	(Constant)	-72.876	136.560		-.534	.596
	No_Outliers_Twitter_Following	-.114	.054	-.526	-2.118	.040
	No_Outliers_Twitter_Followers	.054	.027	.519	2.031	.048

	No_Outliers_FourSquare_Score	7.786	3.993	.289	1.950	.057
	No_Outliers_TA_Rating	30.019	30.255	.138	.992	.326
16	(Constant)	60.135	26.012		2.312	.025
	No_Outliers_Twitter_Following	-.121	.054	-.556	-2.256	.029
	No_Outliers_Twitter_Followers	.057	.026	.550	2.171	.035
	No_Outliers_FourSquare_Score	6.670	3.831	.248	1.741	.088
17	(Constant)	98.807	13.824		7.147	.000
	No_Outliers_Twitter_Following	-.124	.055	-.571	-2.273	.028
	No_Outliers_Twitter_Followers	.068	.026	.654	2.602	.012

a. Dependent Variable: No_Outliers_Cost_of_Waste_per_room

Hypothesis 5

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3193.320	3392.920		.941	.354
	Social Media Staff	118.378	106.243	.183	1.114	.273
	No_Outliers_Number_of_Tweets	-.070	.304	-.078	-.231	.819
	No_Outliers_Twitter_Following	-.623	.875	-.222	-.713	.481
	No_Outliers_Twitter_Followers	.787	.443	.586	1.775	.085
	Facebook (Participation)	-512.585	668.702	-.132	-.767	.449
	No_Outliers_FB_Likes	-.048	.122	-.169	-.391	.699
	No_Outliers_FB_Talking_About	-.613	1.483	-.191	-.413	.682

	No_Outliers_FB_Checkins	.034	.023	.575	1.451	.156
	YouTube (Presence)	-176.482	711.825	-.046	-.248	.806
	No_Outliers_YouTube_Videos	-.035	.522	-.018	-.067	.947
	FourSquare (Presence)	-559.889	909.767	-.145	-.615	.543
	No_Outliers_FourSquare_Score	53.605	96.527	.155	.555	.583
	No_Outliers_FourSquare_Total_Visits	.047	.063	.168	.751	.458
	Pinterest (Presence)	-191.195	601.274	-.063	-.318	.753
	Flickr (Presence)	-467.732	591.312	-.145	-.791	.435
	No_Outliers_TA_Rating	-90.843	419.133	-.032	-.217	.830
	No_Outliers_TA_Reviews	-.054	.361	-.034	-.150	.882
	Total Number of Social Media Sites (Out of 7)	-391.377	409.928	-.371	-.955	.347
2	(Constant)	3167.140	3319.265		.954	.347
	Social Media Staff	117.724	104.188	.182	1.130	.267
	No_Outliers_Number_of_Tweets	-.077	.279	-.086	-.277	.783
	No_Outliers_Twitter_Following	-.624	.861	-.223	-.725	.474
	No_Outliers_Twitter_Followers	.795	.423	.592	1.879	.069
	Facebook (Participation)	-529.164	612.110	-.137	-.864	.394
	No_Outliers_FB_Likes	-.050	.116	-.177	-.431	.669
	No_Outliers_FB_Talking_About	-.644	1.387	-.200	-.464	.645
	No_Outliers_FB_Checkins	.034	.020	.587	1.691	.100
	YouTube (Presence)	-165.735	683.094	-.043	-.243	.810
	FourSquare (Presence)	-550.963	886.345	-.142	-.622	.538

	No_Outliers_FourSquare_Score	55.597	90.470	.161	.615	.543
	No_Outliers_FourSquare_Total_Visits	.047	.061	.165	.767	.449
	Pinterest (Presence)	-190.478	592.043	-.063	-.322	.750
	Flickr (Presence)	-465.244	581.182	-.144	-.801	.429
	No_Outliers_TA_Rating	-89.055	411.930	-.032	-.216	.830
	No_Outliers_TA_Reviews	-.062	.335	-.039	-.186	.853
	Total Number of Social Media Sites (Out of 7)	-390.211	403.337	-.370	-.967	.340
3	(Constant)	3125.745	3264.477		.958	.345
	Social Media Staff	116.340	102.437	.179	1.136	.264
	No_Outliers_Number_of_Tweets	-.085	.272	-.095	-.313	.756
	No_Outliers_Twitter_Following	-.644	.842	-.230	-.765	.449
	No_Outliers_Twitter_Followers	.794	.417	.591	1.905	.065
	Facebook (Participation)	-517.759	600.336	-.134	-.862	.394
	No_Outliers_FB_Likes	-.052	.113	-.185	-.459	.649
	No_Outliers_FB_Talking_About	-.671	1.359	-.209	-.494	.625
	No_Outliers_FB_Checkins	.034	.020	.586	1.712	.096
	YouTube (Presence)	-149.149	667.590	-.039	-.223	.825
	FourSquare (Presence)	-553.274	873.587	-.143	-.633	.531
	No_Outliers_FourSquare_Score	54.568	89.010	.158	.613	.544
	No_Outliers_FourSquare_Total_Visits	.045	.059	.160	.760	.453
	Pinterest (Presence)	-188.468	583.481	-.062	-.323	.749
	Flickr (Presence)	-471.893	571.793	-.146	-.825	.415
	No_Outliers_TA_Rating	-91.930	405.756	-.033	-.227	.822

	Total Number of Social Media Sites (Out of 7)	-382.552	395.502	-.363	-.967	.340
4	(Constant)	2863.039	3003.729		.953	.347
	Social Media Staff	115.575	100.981	.178	1.145	.260
	No_Outliers_Number_of_Tweets	-.080	.267	-.089	-.300	.766
	No_Outliers_Twitter_Following	-.651	.830	-.232	-.784	.438
	No_Outliers_Twitter_Followers	.769	.396	.573	1.942	.060
	Facebook (Participation)	-508.590	590.747	-.131	-.861	.395
	No_Outliers_FB_Likes	-.052	.112	-.186	-.468	.643
	No_Outliers_FB_Talking_About	-.680	1.340	-.212	-.507	.615
	No_Outliers_FB_Checkins	.035	.020	.590	1.749	.089
	FourSquare (Presence)	-562.687	860.646	-.145	-.654	.518
	No_Outliers_FourSquare_Score	55.089	87.764	.159	.628	.534
	No_Outliers_FourSquare_Total_Visits	.045	.058	.159	.767	.448
	Pinterest (Presence)	-153.004	553.801	-.051	-.276	.784
	Flickr (Presence)	-447.345	553.468	-.139	-.808	.424
	No_Outliers_TA_Rating	-90.904	400.186	-.032	-.227	.822
	Total Number of Social Media Sites (Out of 7)	-341.186	344.707	-.324	-.990	.329
5	(Constant)	2352.633	1966.949		1.196	.239
	Social Media Staff	113.168	99.092	.174	1.142	.261
	No_Outliers_Number_of_Tweets	-.079	.264	-.088	-.300	.766
	No_Outliers_Twitter_Following	-.630	.814	-.225	-.774	.444
	No_Outliers_Twitter_Followers	.760	.389	.566	1.956	.058

	Facebook (Participation)	-501.731	582.152	-.130	-.862	.394
	No_Outliers_FB_Likes	-.054	.110	-.194	-.495	.624
	No_Outliers_FB_Talking_About	-.651	1.317	-.203	-.495	.624
	No_Outliers_FB_Checkins	.034	.019	.576	1.760	.087
	FourSquare (Presence)	-545.652	846.004	-.141	-.645	.523
	No_Outliers_FourSquare_Score	59.663	84.290	.172	.708	.484
	No_Outliers_FourSquare_Total_Visits	.046	.058	.162	.796	.431
	Pinterest (Presence)	-115.351	521.405	-.038	-.221	.826
	Flickr (Presence)	-413.354	525.789	-.128	-.786	.437
	Total Number of Social Media Sites (Out of 7)	-324.424	332.252	-.308	-.976	.335
6	(Constant)	2091.922	1554.471		1.346	.187
	Social Media Staff	111.297	97.453	.172	1.142	.261
	No_Outliers_Number_of_Tweets	-.089	.257	-.099	-.347	.731
	No_Outliers_Twitter_Following	-.611	.799	-.218	-.764	.450
	No_Outliers_Twitter_Followers	.757	.383	.564	1.974	.056
	Facebook (Participation)	-466.590	552.817	-.121	-.844	.404
	No_Outliers_FB_Likes	-.053	.108	-.189	-.489	.627
	No_Outliers_FB_Talking_About	-.672	1.296	-.209	-.519	.607
	No_Outliers_FB_Checkins	.034	.019	.573	1.776	.084
	FourSquare (Presence)	-452.268	723.691	-.117	-.625	.536
	No_Outliers_FourSquare_Score	66.145	78.011	.191	.848	.402
	No_Outliers_FourSquare_Total_Visits	.047	.057	.166	.827	.413

	Flickr (Presence)	-367.110	476.211	-.114	-.771	.446
	Total Number of Social Media Sites (Out of 7)	-292.028	294.384	-.277	-.992	.328
7	(Constant)	2086.315	1536.290		1.358	.182
	Social Media Staff	111.615	96.314	.172	1.159	.254
	No_Outliers_Twitter_Following	-.745	.691	-.266	-1.079	.288
	No_Outliers_Twitter_Followers	.731	.372	.544	1.966	.057
	Facebook (Participation)	-468.397	546.356	-.121	-.857	.397
	No_Outliers_FB_Likes	-.075	.087	-.267	-.864	.393
	No_Outliers_FB_Talking_About	-.459	1.128	-.143	-.407	.686
	No_Outliers_FB_Checkins	.033	.019	.563	1.772	.084
	FourSquare (Presence)	-437.759	714.070	-.113	-.613	.543
	No_Outliers_FourSquare_Score	67.538	77.000	.195	.877	.386
	No_Outliers_FourSquare_Total_Visits	.047	.056	.167	.842	.405
	Flickr (Presence)	-347.101	467.202	-.108	-.743	.462
	Total Number of Social Media Sites (Out of 7)	-293.005	290.943	-.278	-1.007	.320
8	(Constant)	2064.892	1518.877		1.359	.182
	Social Media Staff	110.334	95.228	.170	1.159	.254
	No_Outliers_Twitter_Following	-.738	.683	-.264	-1.081	.286
	No_Outliers_Twitter_Followers	.756	.363	.563	2.084	.044
	Facebook (Participation)	-460.503	540.140	-.119	-.853	.399
	No_Outliers_FB_Likes	-.097	.066	-.347	-1.469	.150
	No_Outliers_FB_Checkins	.028	.013	.472	2.111	.041

	FourSquare (Presence)	-370.939	687.473	-.096	-.540	.593
	No_Outliers_FourSquare_Score	73.944	74.564	.214	.992	.327
	No_Outliers_FourSquare_Total_Visits	.053	.053	.189	.999	.324
	Flickr (Presence)	-334.935	461.231	-.104	-.726	.472
	Total Number of Social Media Sites (Out of 7)	-298.202	287.537	-.283	-1.037	.306
9	(Constant)	1686.972	1335.748		1.263	.214
	Social Media Staff	97.158	91.224	.150	1.065	.293
	No_Outliers_Twitter_Following	-.724	.676	-.258	-1.070	.291
	No_Outliers_Twitter_Followers	.746	.359	.556	2.078	.044
	Facebook (Participation)	-376.892	512.830	-.097	-.735	.467
	No_Outliers_FB_Likes	-.094	.066	-.336	-1.442	.157
	No_Outliers_FB_Checkins	.027	.013	.454	2.070	.045
	No_Outliers_FourSquare_Score	89.644	68.041	.259	1.317	.195
	No_Outliers_FourSquare_Total_Visits	.054	.053	.193	1.033	.308
	Flickr (Presence)	-234.123	417.940	-.073	-.560	.578
	Total Number of Social Media Sites (Out of 7)	-253.249	272.753	-.240	-.928	.359
10	(Constant)	1374.154	1203.222		1.142	.260
	Social Media Staff	93.412	90.214	.144	1.035	.307
	No_Outliers_Twitter_Following	-.737	.670	-.263	-1.100	.278
	No_Outliers_Twitter_Followers	.731	.355	.544	2.058	.046
	Facebook (Participation)	-344.896	505.356	-.089	-.682	.499
	No_Outliers_FB_Likes	-.092	.065	-.329	-1.425	.162

	No_Outliers_FB_Checkins	.026	.013	.448	2.066	.045
	No_Outliers_FourSquare_Score	81.459	65.895	.235	1.236	.223
	No_Outliers_FourSquare_Total_Visits	.057	.052	.202	1.092	.281
	Total Number of Social Media Sites (Out of 7)	-195.522	250.415	-.186	-.781	.439
11	(Constant)	1009.988	1071.556		.943	.351
	Social Media Staff	94.665	89.620	.146	1.056	.297
	No_Outliers_Twitter_Following	-.756	.665	-.270	-1.137	.262
	No_Outliers_Twitter_Followers	.716	.352	.533	2.034	.048
	No_Outliers_FB_Likes	-.092	.064	-.328	-1.430	.160
	No_Outliers_FB_Checkins	.026	.013	.449	2.082	.043
	No_Outliers_FourSquare_Score	67.831	62.396	.196	1.087	.283
	No_Outliers_FourSquare_Total_Visits	.060	.052	.213	1.166	.250
	Total Number of Social Media Sites (Out of 7)	-125.764	227.147	-.119	-.554	.583
12	(Constant)	454.973	375.571		1.211	.232
	Social Media Staff	90.339	88.556	.139	1.020	.313
	No_Outliers_Twitter_Following	-.785	.658	-.280	-1.193	.239
	No_Outliers_Twitter_Followers	.675	.341	.503	1.977	.054
	No_Outliers_FB_Likes	-.095	.064	-.337	-1.486	.145
	No_Outliers_FB_Checkins	.026	.013	.443	2.075	.044
	No_Outliers_FourSquare_Score	45.934	47.872	.133	.960	.343
	No_Outliers_FourSquare_Total_Visits	.059	.051	.208	1.150	.256
13	(Constant)	697.114	277.903		2.508	.016

	Social Media Staff	82.515	88.100	.127	.937	.354
	No_Outliers_Twitter_Following	-.823	.656	-.294	-1.255	.216
	No_Outliers_Twitter_Followers	.693	.340	.516	2.035	.048
	No_Outliers_FB_Likes	-.085	.063	-.302	-1.351	.184
	No_Outliers_FB_Checkins	.025	.013	.433	2.030	.048
	No_Outliers_FourSquare_Total_Visits	.077	.048	.272	1.610	.115
14	(Constant)	903.205	169.510		5.328	.000
	No_Outliers_Twitter_Following	-.799	.655	-.285	-1.221	.229
	No_Outliers_Twitter_Followers	.693	.340	.516	2.039	.047
	No_Outliers_FB_Likes	-.062	.058	-.220	-1.070	.290
	No_Outliers_FB_Checkins	.024	.012	.409	1.936	.059
	No_Outliers_FourSquare_Total_Visits	.077	.048	.274	1.629	.110
15	(Constant)	884.124	168.834		5.237	.000
	No_Outliers_Twitter_Following	-.510	.597	-.182	-.854	.398
	No_Outliers_Twitter_Followers	.500	.288	.372	1.733	.090
	No_Outliers_FB_Checkins	.016	.010	.272	1.616	.113
	No_Outliers_FourSquare_Total_Visits	.074	.048	.264	1.568	.124
16	(Constant)	895.650	167.807		5.337	.000
	No_Outliers_Twitter_Followers	.313	.187	.233	1.670	.102
	No_Outliers_FB_Checkins	.015	.010	.257	1.535	.131
	No_Outliers_FourSquare_Total_Visits	.072	.047	.254	1.517	.136
17	(Constant)	983.739	159.553		6.166	.000

	No_Outliers_Twitter_Followers	.391	.183	.291	2.140	.037
	No_Outliers_FB_Checkins	.024	.008	.407	2.992	.004

a. Dependent Variable: No_Outliers_Cost_of_Energy_per_room

Hypothesis 6

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	73.619	24.261		3.035	.004
	No_Outliers_Percentage_Recycled	.021	.282	.009	.075	.941
	No_Outliers_Cost_of_Waste_per_room	-.040	.134	-.042	-.299	.766
	No_Outliers_Cost_of_Water_per_room	.109	.046	.488	2.370	.022
	No_Outliers_Cost_of_Energy_per_room	.012	.014	.161	.871	.388
2	(Constant)	74.733	18.915		3.951	.000
	No_Outliers_Cost_of_Waste_per_room	-.043	.126	-.045	-.341	.735
	No_Outliers_Cost_of_Water_per_room	.110	.044	.492	2.510	.015
	No_Outliers_Cost_of_Energy_per_room	.012	.014	.159	.882	.382
3	(Constant)	71.359	15.966		4.469	.000
	No_Outliers_Cost_of_Water_per_room	.104	.039	.463	2.640	.011
	No_Outliers_Cost_of_Energy_per_room	.013	.013	.169	.964	.340
4	(Constant)	79.892	13.275		6.018	.000
	No_Outliers_Cost_of_Water_per_room	.133	.026	.592	5.195	.000

a. Dependent Variable: No_Outliers_RevPAR